PROCEEDINGS

OF THE

MADRAS GOVERNMENT

IN THE

PUBLIC WORKS DEPARTMENT

IRRIGATION BRANCH,

FOR THE

MONTH OF JANUARY 1902.

Printed by Authority.

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PUBLIC WORKS DEPARTMENT.

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Mogallamori Channel of the Bendamurlunka Canal, Godavari Central Delta.—The estimate of Rs. 2,500, for extending the — and for excavating a branch channel from it, sanctioned, and a copy of the Proceedings ordered to be forwarded to the Government of India for information.	18th Jan., No. 78 I.	...	......
Forwarded	18th Jan., No. 79 I.,	...	......
Wooden bridge over the Main Canal, Kistna Eastern Division.—The estimate of Rs. 4,700, for constructing a temporary —, sanctioned, and a copy of the Proceedings ordered to be forwarded to the Government of India for information.	18th Jan., No. 80 I.	...	......
Forwarded	18th Jan., No. 81 I.	...	......

1 Subjects.	2 Numbers and Dates of Proceedings.	3 Date of Report to Secretary of State for India.	4 Numbers and Dates of previous Proceedings.
Tatimakula Anicut across the surplus channel of Pedda Tippasamudram Tank, Cuddapah Division.—The estimate of Rs. 4,700 for reconstructing the —, sanctioned.	1902. 20th Jan., No. 84 I.	...	......
Drainage Sluice.—The estimate of Rs. 3,800 for constructing a — on the right bank of the Velappar at 76-M-5, Nannilam taluk, Tanjore division, sanctioned; and a copy of the Proceedings, ordered to be forwarded to the Government of India for information.	20th Jan., No. 85 I.	...	......
Forwarded	20th Jan., No. 86 I.	...	......
Vadagarai Channel, Periyár project. — The estimate, amounting to Rs. 12,000, for improving the —, sanctioned and a copy of the Proceedings, ordered to be forwarded to the Government of India for information.	20th Jan., No. 87 I.	...	......
Forwarded	20th Jan., No. 88 I.	...	......
Duvvur Tank, Pennér River Canals System.—The estimate of Rs. 8,200, for constructing a head sluice to the right of the existing weir No. 1 of the — and excavating a leading channel therefrom to the bed of the Kanigiri reservoir, sanctioned with remark; and a copy of the Proceedings, ordered to be forwarded to the Government of India for information.	20th Jan., No. 89 I.	...	......
Forwarded	20th Jan., No. 90 I.	...	......
Foot Bridge.—The estimate of Rs. 1,700 for constructing a — over drop at fifth mile of the eastern channel, Pennér river canals system, sanctioned; and a copy of the Proceedings ordered to be forwarded to the Government of India for information.	20th Jan., No. 91 I.	...	......
Forwarded	20th Jan., No. 92 I.	...	......
Administration Report of the Public Works Department, Irrigation Branch, for 1900–1901.—The — as drawn up by the Chief Engineer for Irrigation, approved; and forty copies thereof ordered to be forwarded to the Government of India.	20th Jan., No. 93 I.	...	......
Forwarded	20th Jan., No. 94 I.	...	......
Provincial Grants (Irrigation) for 1902–1903.—Letter from the Government of India sanctioning the —, communicated, with remarks, to the Chief Engineer for Irrigation.	24th Jan., No. 109 I.	...	......

1 Subjects.	2 Numbers and Dates of Proceedings.	3 Date of Report to Secretary of State for India.	4 Numbers and Dates of previous Proceedings.
Dumagudiem Anicut.—The payment of Rupees 1,663–10–6 to Messrs. Martin & Co. of Cocanada on account of advances made to coolies for closing the breaches in, and raising the flood embankment of, the —, sanctioned.	1902. 24th Jan., No. 118 I.	...	16th Oct. 1901, No. 776 I.
Boat.—The estimate of Rs. 720 for constructing a — for the camp clerk of the office of the Superintending Engineer, I Circle, sanctioned.	24th Jan., No. 119 I.	...	......
Iron second-class ferry ballacuts.—The estimate of Rs. 1,980 for constructing three — for use in the Kistna Eastern division, sanctioned.	24th Jan., No. 120 I.	...	......
Bodagumala Branch of No. 11 Distributary, Rushikulya Canal.—The estimate, amounting to Rs. 1,920, for excavating —, sanctioned; and a copy of the Proceedings, ordered to be forwarded to the Government of India for information.	24th Jan., No. 121 I.	...	......
Forwarding a copy of the Proceedings to the Government of India for information.	24th Jan., No. 122 I.	...	......
Financial results of Irrigation.—Proceedings, Board of Revenue, forwarding to the Examiner, Public Works Accounts, a statement showing the — under Classes I and II Works for fasli 1310 and submitting to Government Board's review of the irrigation accounts of fasli 1310 (1900–1901), communicated to the officers concerned.	28th Jan., No. 129 I.	...	......
Buddi Tank Drainage Scheme, Nellore.—Letter from the Government of India, sanctioning the estimate, amounting to Rs. 18,100, for the —, communicated to the officers concerned.	28th Jan., No. 130 I.	...	29th Nov. 1901, Nos. 917–18 I.
Paudur Hissa Tank, Kalinganadi Minor Basin, Chingleput District.—The execution, by the Public Works Department, of the contribution work of effecting repairs to the —, sanctioned with remarks.	29th Jan., No. 133 I.	...	.....
Construction of a Picottah.—The — by S. Giddiah in the Kurnool-Cuddapah canal, sanctioned.	29th Jan., No. 134 I.	...	......
Experimental Hydraulic Shutter.—The estimate of Rs. 3,000 for making an —, proposed to be applied eventually at the Sangam head works, sanctioned.	29th Jan., No. 135 I.	...	......

1 Subjects.	2 Numbers and Dates of Proceedings.	3 Date of Report to Secretary of State for India.	4 Numbers and Dates of previous Proceedings.
Wharves.—The proposal of the Superintending Engineer, II Circle, to constitute certain lengths of the Pulleru and Masulipatam canals — in view of the proposed construction of the Bezwada-Masulipatam Railway, approved with remarks.	1902. 30th Jan., No. 136 I.	...	......
Quarters for the Sub-section Officer, Periyár Project.—The estimate of Rs. 750 for constructing —, sanctioned.	30th Jan., No. 137 I.	...	......
Wadada Main Channel, Ganjám Division — The estimates of Rs. 1,500 and Rs 1,800 for the diversion, in two places, of the —, sanctioned.	30th Jan., No. 138 I.	...	......
Closure of Canals, Kistna Delta System, in 1902. —Ordering the publication, in the Fort St. George, Gódávari and Kistna District Gazettes, of a revised notification regarding the —.	31st Jan., No. 143 I.	...	27th Feb. 1901, No. 187 I. 21st Jan. 1901, No. 65 I.

IRRIGATION.

Government {1902} of Madras.

PUBLIC WORKS.

Recd.	1902.	*Enclosures*
Regd.		*Spare copies*

G.O., No. 4 I., 2nd January 1902.

JANUARY.

Yanam Water-supply

Directing that the arrangement made in 1884 by Captain Rawson, R.E., under which water was to be allowed to the French Settlement for four days in the week, be reverted to; and stating that His Excellency the Governor of the French Settlements in India be requested to take steps to prevent the recurrence of the mischief done to Kapulapalem channel by the French ryots.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

Read—again the following papers :—

G.O., No. 259 I., dated 21st March 1882.
" " 231 I. " 6th " 1900.
" " 811 I. " 28th September 1900.
" " 971 I. " 17th November 1900.
" " 324 I. " 3rd April 1901.

Read—also the following papers :—

From His Excellency Monsieur RODIER, Governor of the French Settlements in India, to His Excellency the Governor of Madras, dated Pondicherry, 3rd April 1901, No. 12.

Par lettre du 4 Décembre dernier, No. 14, en exposant les doléances de nos nationaux à Yanaon, mon prédécesseur a eu l'honneur de demander à votre Excellence de vouloir bien, après l'enquête à laquelle elle devait faire procéder, ordonner le retour aux usages qui existaient depuis 1884 et qui n'ont eté modifiés qu'en l'année 1899.

La communication ci-dessus étant restée sans réponse jusqu'à ce jour, je prends la liberté de venir demander à votre Excellence de donner le plus tôt possible une solution à une question qui intéresse à un si haut degré la dépendance de Yanaon.

Cette question a pour point de départ l'engagement pris en 1894 par Monsieur le Collecteur de la région vis-à-vis de l'Administration de Yanaon. En effet, en 1894, dans le but denrayer les débordements périodiques du Godavéry qui ravageaient le territoire britannique, le Gouvernement de votre Excellence obtint du Gouvernement français l'autorisation de relier la digue partant de Radjamandry au mur de notre quai. A la suite de cette autorisation, le Collecteur, Monsieur Prendergast, écrivait le 13 Juin 1894 à Monsieur Hugot, alors chef du service à Yanaon : "En construisant des écluses, les terres de Yanaon *recevront* exactement la quantité d'eau qui leur est nécessaire."

L'endiquement, fait à cette époque par le Gouvernement de votre Excellence, ne permettait plus à nos terres de Yanaon de profiter des crues annuelles du Gódávéry pour les fertiliser et alimenter les étangs.

L'eau devait, en retour, nous être fournie par votre Gouvernement et c'est cet avantage, qui nous était offert, qui nous détermina à accorder l'autorisation sollicitée à cette époque.

Les terres de l'établissement de Yanaon ont donc pleinement joui des eaux venant du territoire anglais. Mais en 1884, à la suite de la communication de l'acte du Gouvernement de Madras, du 21 Mars 1882, contenant la négation du droit que le Gouvernement français croyait incontestablement avoir au profit des terres de Yanaon et pour toujours aux eaux distribuées par le canal de Dawlessavarom, et en réponse à une réclamation présentée par Monsieur Bayet, Chef du service à Yanaon, Monsieur Rawson, Ingénieur, donna, le 17 Septembre 1884, les instructions suivantes à l'officier de la subdivision du Sud : "Veuillez prendre des mesures pourque les barrages temporaires dans l'ancien canal entre la nouvelle écluse et la limite du territoire français ne soient autorisés que pendant *trois jours de la semaine*, le reste du temps l'eau doit aller *librement* à Yanaon." Veuillez, je vous prie, à cela vous même, et avertissez le Delta Supérintendant de veiller à ce que ces ordres soient exécutés."

Cet arrangement, qui donnait satisfaction à nos nationaux et leur permettait d'irriguer leurs champs, ne reçut plus son exécution à partir de 1899. En effet à la date du 31 Mars de la dite année, et à la suite d'instructions reçues, Monsieur le Supérintendant du Delta informa Monsieur l'Administrateur de Yanaon que l'eau ne serait fournie pendant trois jours que pour remplir les étangs et non pour irriguer les terres, avec menace de fermer l'écluse, si un champ quelconque était arrosé. Depuis cette époque, le barrage établi sur le territoire anglais à Capoulapaléom, en deça de notre écluse, a été maintenu et l'eau ne pénètre plus dans notre canal d'irrigation.

Celle est la situation actuelle à laquelle votre Excellence comprendra qu'il importe de donner d'urgence une solution. La population de Yanaon souffre énormément, les champs ne sont plus irrigués, la récolte de l'année dernière a complètement manqué, faute d'eau.

Je me permets donc d'insister auprès de votre Excellence pourque, à défaut des conventions stipulées en 1894, une solution conforme à l'arrangement édicté en 1884 par Monsieur l'Ingénieur Rawson, intervienne le plus tôt possible, donnant également satisfaction aux intérêts des deux Gouvernements.

Memorandum to the Supg. Engineer, I Circle, dated			22nd April	1901,	No.	19 G.D.
Endorsement from the	,,	,,	,,	15th June	,,	,,	1423 G.E.
Memorandum to the	,,	,,	,,	20th ,,	,,	,,	40 G.D.
Letter from the	,,	,,	,,	26th Aug.	,,	,,	2190 G.E.

From His Excellency Monsieur RODIER, Governor of the French Settlements in India, to His Excellency the Governor of Madras, dated Pondicherry, 7th September 1901, No. 18.

J'ai l'honneur de vous accuser réception de la lettre que vous avez bien voulu m'adresser, le 8 Avril dernier, en réponse à ma dépêche du 4 Décembre 1900 concernant l'irrigation de cette partie de notre Etablissement de Yanaon traversée par le canal anglais, qui se développe depuis le barrage de Dawlessavaram jusqu'à la riviére Coringua.

Si je me suis exactement rendu compte de l'opinion que votre Excellence s'est formée au sujet de cette question, il faudrait, d'aprés elle, attribuer la disette d'eau dont nos cultivateurs se plaignent à ce fait que le Gouvernement français aurait négligé de construire des écluses dans la digue élevée par les ingénieurs de Sa Majesté Britannique.

Je regrette de ne pouvoir me rallier à ces conclusions, et je demande à votre Excellence la permission de lui indiquer les motifs pour lesquels je ne saurais envisager au même point de vue ni l'origine de l'affaire, ni les conséquences qu'on doit, à mon avis, tirer de son historique.

En principe l'irrigation était assurée au moyen des eaux provenant des crues du Godavéry. Le procédé était primitif. Lorsque le Gouvernement anglais jugea utile d'améliorer, dans ces parages, la condition des terres á nelly, qui, tantôt souffraient des inondations du Godavéry et, tantôt, de la sécheresse, il dût chercher un remède à ce double inconvénient.

C'est alors qu'il décida et la construction d'une digue destinée à protéger les terres contre les crues subites du Godavéry et le creusement d'un canal destiné à faire bénéficier ces mêmes terres, en toutes saisons, — je veux dire à l'époque des hautes eaux et à celle des basses eaux, d'une irrigation suffisante à l'aménagement des rizières.

La digue et le canal étaient, par conséquent, les deux éléments inséparables d'un système de préservation contre deux fléaux, dont il eut été illusoire de combattre le premier, si, en même temps, on n'eut combattu le second.

La digue fut élevée le long du canal, au moyen des terres provenant du creusement de ce dernier.

Sur toute l'étendue de ce talus, aussi bien dans la partie anglaise qui a environ 50 kilomètres de longueur, que sur la partie française qui en a trois, aucune écluse ne fut construite, et je ne pense pas qu'on ait jamais eu l'intention d'en construire ; car, elles n'avaient aucune raison d'exister, puisque la digue est un ouvrage de protection et non de distribution et qu'elles en eussent compromis la solidité en créant des brêches dangereuses.

Je serais donc fort embarrassé d'interpréter la lettre dans laquelle Monsieur le Collecteur Prendergast faisait allusion à des écluses à construire par le Gouvernement français, si, comme je viens de le rappeler, on n'avait, en même temps qu'on élevait la digue, creusé un canal, lequel, détournant les eaux du Godavéry à la hauteur du barrage de Dawlessavaram, devait en opérer la distribution au profit des riverains. Or, de quelle façon avait lieu cette distribution ? Ou moyen d'écluses. Dès lors, le sens de la lettre écrite en 1854 se dégage nettement. Monsieur le Collecteur Prendergast conseillait aux autorités françaises de distribuer, par le procédé dont usaient les ingénieurs anglais, l'eau qu'amenait le canal d'irrigation.

Le conseil fut suivi ; des écluses furent construites sur la partie du canal traversant notre territoire et les contemporains virent là un résultat logique, nécessaire, de notre collaboration efficace au double travail de la construction de la digue et du creusement du canal, collaboration qui consistait dans l'autorisation donnée d'employer gratuitement les terrains demandés par votre Gouvernement.

Ici je prends la liberté de faire appel à la bienveillante attention de votre Excellence.

L'autorisation dont il est question avait, en l'espèce, un intérêt capital, puisque c'est d'elle que dépendait, dans une large mesure, la réussite de votre œuvre. Elle permettait de combler une solution de continuité de trois kilomètres par laquelle les débordements auraient trouvé passage et rendu insuffisant le travail que votre Gouvernement avait conduit jusqu'à votre frontière ouest.

En ce qui nous concerne, nous faisions le sacrifice de 45,000 mètres carrés de terrain et nous renoncions à recevoir les crues du Godavéry qui constituaient jusqu'alors, pour notre dépendance, l'unique mode d'irrigation, mode imparfait évidemment, mais qui valait mieux que rien, néanmoins.

Peut-on admettre qu'en cette circonstance nous ayions abandonné purement et simplement, sans compensation d'aucune sorte, les intérêts de nos nationaux et ne s'impose-t-il pas à l'esprit que vos prédécesseurs et les miens, Excellence, s'étaient mis d'accord en vue de faire bénéficier leurs administrés des mêmes avantages ?

Cette interprétation qui me semble avoir pour elle l'équité est également corroborée par les faits eux-mêmes puisque, pendant 44 années consécutives, elle a été admise.

La question est importante ; elle intéresse l'existence matérielle de quelques milliers d'indigènes.

J'espère que votre Excellence voudra bien l'examiner à nouveau, et, pour les raisons que j'ai développées, conclure au retour au " modus vivendi " qui a duré de 1856 à 1900, c'est-à-dire près d'un demi siécle.

Memorandum to the Supg. Engineer, I Circle, dated 11th Sept. 1901, No. 67 G.D.
Letter from the „ „ „ 24th Oct. „ „ 2758 G.E.

Order—No. 4 I., dated 2nd January 1902.

From the last of the papers read above, it is observed that the fact that water for cultivation was not supplied to Yanam since 1899 was due to the Executive Engineer, Gódávari Eastern division, having been unaware of the arrangement made in 1884

by Captain Rawson, R.E., under which water was to be allowed to the French Settlement for four days in the week. Although such a supply of water is not a right to which the French authorities have a claim, the Government directs that, in proof of the continuance of that consideration by which the Settlement has been receiving a supply from 1857 to 1899, the arrangement of Captain Rawson, R.E., be reverted to and not lost sight of.

2. His Excellency the Governor of the French Settlements will be requested to take steps to prevent the recurrence of the mischief done to the Kapulapalem channel by the French ryots.

3. Ordered that the following letter be sent to His Excellency the Governor of the French Settlements in India.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation, } with copy of letter.
,, Superintending Engineer, I Circle, } with copy of letter.
,, Political Department, with draft letter.

POLITICAL.

Mis. No. 22, Political.

To

HIS EXCELLENCY THE GOVERNOR OF THE
FRENCH SETTLEMENTS IN INDIA.

Your Excellency,

I have the honour to acknowledge the receipt of your letters, No. 12, dated 3rd April 1901, and No. 18, dated 7th September 1901, and to inform you that I have made a further and most careful enquiry into the facts of the case. I am unable, however, to come to any other conclusion than that already communicated to your Excellency, namely, that the supply of water to Yanam is not a right to which your administration can lay a claim.

In proof, however, of that consideration which it has always been our desire to display towards your Government, I have directed that the arrangement of Captain Rawson, R.E., to which your Excellency refers and which appears to have given general satisfaction, shall be conscientiously carried out. Your Excellency will understand nevertheless that in case of great scarcity the British ryots must receive prior attention.

I take this opportunity of observing that since 1899 the banks of the Kapulapalem channel have on certain occasions been cut and the regulators tampered with by persons dwelling under the authority of the French Government. I feel it needless to express my assurance that your Excellency will take steps to prevent a recurrence of any mischief of this kind.

Be pleased to accept, your Excellency, the assurance of the high consideration with which

I have the honour to be,
Your Excellency's most obedient servant,

(Signed) AMPTHILL.

Madras,
16th January 1902.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. *Spare copies*

G.O., No. 16 I., 7th January 1902.

JANUARY.

Peddinayudu Tank of Chennarowpalem, Kistna Northern Division

The estimate, amounting to Rs. 35,000, for restoring the ruined —, sanctioned, with remark.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers :—

From the Superintending Engineer, II Circle, dated 9th November 1901, No. 300 I.

ENCLOSURE.

REPORT to accompany the estimate for restoring the ruined Peddinayudu tank of Chennarowpalem in Nandigáma taluk.

1. Amount of estimate, Rs. 36,450.

2. This tank was constructed a little more than three centuries ago by the zamindars of Zuzzur. It was originally formed without a masonry surplus escape and the tank surplused over the high ground on the left flank, but the soil here not being sufficiently firm to resist the effect of the surplus discharge scoured, and a retrogression of levels took place a succession of extensions of the bund and retrogression of levels occurred till eventually the idea of surplusing on this flank was abandoned and a weir was then built on the right flank. This weir does not appear to have been washed away, but judging from appearances it was demolished for its materials after the tank was abandoned.

The tank continued in existence and irrigated about 1,000 acres of land mostly in Narasimharowpalem and Gattimukola villages till about 60 years ago when it breached. The breach was due partly to the bund being neglected and waters overtopping it at low places and partly to the water finding its way along an outcrop of soft rock at the bed-level of the breach. Since then the tank has been abandoned.

Within the last few years the restoration of the tank has been under consideration, and after careful investigation it has been decided to restore the tank on the following lines.

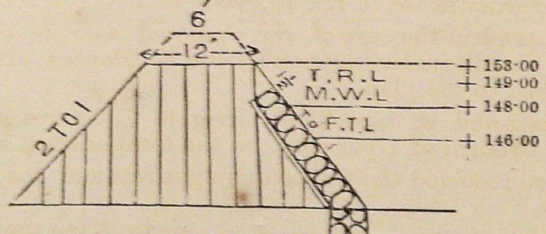
3. A.B.M. on the first platform of the sluice has been assumed to have a value + 147 and to this all the levels are reduced.

4. The works that will be required to restore the tank will be—

(*a*) Raising the bund and providing revetment.
(*b*) Closing the breach.
(*c*) Improving the existing sluice.
(*d*) Providing adequate surplus works.
(*e*) Excavating branch and distributary channels.
(*f*) Land compensation.

5. *Surplus Arrangement.*—The tank has a catchment area of 26·64 square miles, and the total area of irrigable land under it is taken as 700 acres, which would be 26·27 acres per square mile of catchment.

Bund.—The bund will be made up of the following section, so that the raising of the F.T.L. to + 148·00 may be carried out subsequently if found necessary :—



The earth for the bund will be obtained from the tank bed. There is a big breach in the bund and a separate estimate with cross sections for closing the same accompanies this.

Sluice.—The tank has at present one sluice which requires repairs. A separate estimate for executing the necessary repairs also accompanies.

Hydraulic Details.—The area of catchment basin is 26·64 square miles which will give a maximum flood discharge of 5,017 cubic feet per second with a co-efficient 562·50. To dispose of this discharge it is proposed to build a weir at the right flank of the tank 605 feet long, of which 435 feet length serves as a weir and the remaining 170 feet as a byewash as per hydraulic calculations noted on plan of weir. The top width of the weir wall is 5′ 6″ so that it may be suitable for raising subsequently, if found necessary, to level + 148·00.

A lump sum of Rs. 50 has been provided in the estimate for demolishing the existing weir. No apron is provided as the soil is hard and rocky.

Waterspread and capacity.—The area of water spread of the tank at F.T.L. + 146 is 13,102,848 square feet or about 301 acres, and the capacity of the tank is about 81·40 millions of cubic feet as per table of capacities of the tank at different levels. Allowing 0·216 millions of cubic feet per acre, this capacity will be sufficient for 376 acres at a single fill or for the whole ayacut of 760 acres in a little less than two fills. As the rain is fairly well distributed, it may be assumed that the tank will fill twice giving a total storage capacity of 162·80 millions of cubic feet.

Branch and distributary channels.—This channel starts from the existing sluice on the left flank of the tank with bed level + 130·18 and has been designed to irrigate 700 acres of land. The alignment of the branch and distributary channels have been shown on the sketch-map.

The channel runs for the most part of its length through black clayey soil and thence to and in red loamy soil. A sufficient number of pits has been dug and the informations regarding the soils noted on the sections of the channel. A table of bench marks along the line of branch and distributary channels also accompanies.

Necessary hydraulic details are shown on the sheet of longitudinal and cross sections of branch channel. The branch channel will cross the vagu at 0/7/450 by means of a masonry aqueduct for which a lump sum provision is made in the estimate. The detail and working drawings of the same will be worked out when the work is commenced. The other masonry works on the branch channel are of very small importance and lump sum provisions are made in the estimate.

Land Compensation.—The estimate of the value of land to be acquired for the tank bed has been furnished by the Head Assistant Collector in his No. 311/G.L., dated 18th September 1900. Provision has been made in the estimate for fixing boundary, mile and furlong stones.

Financial Prospects.—The statement of outlay and revenue which is appended shows that, when the area proposed is cultivated, a return of 6·72 per cent. will be realized on the estimated cost of the work.

The different kinds of works will be executed in accordance with the standard specification of the Madras Presidency.

(Signed) A. G. ROMILLY,
Ex. Engr., Kistna Northern Division.

12th September 1901.

No. 260 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, II Circle, submits an estimate of Rs. 36,450 for restoring the ruined Peddinayudu tank of Chennarowpalem in Nandigáma taluk, Kistna Northern division. The restoration includes chiefly proposals for closing the existing breach and raising the bund with a top width of 12 feet, constructing a combined byewash and weir, improving the sluice and excavating distributary channels. The bund has been raised 1 foot or to 154·00 to reduce the top width to 8½ feet, and the corewall provided at the site of the breach has been omitted. These alterations have reduced the estimate to Rs. 35,000.

2. The benching allowed in the case of the proposed weir is excessive. If the rock below is not sound, the alternative section should be adopted with steps as shown on a separate sheet attached to the plan.

3. The tank when restored is expected to irrigate 700 acres, from which a net revenue of Rs. 2,450, or a return of 7 per cent. on the total outlay, is anticipated.

4. The proposals have received the Collector's approval and the estimate may be sanctioned.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

20th December 1901.

ORDER—No. 16 I., dated 7th January 1902.

The following estimate is sanctioned:—

Provincial.
Irrigation.
43. Minor Works and Navigation.
Class IV—Minor Works and Navigation for which neither Capital nor Revenue nor Individual Accounts are kept.
(*a*) In charge of Public Works Department.
Kistna Northern Division.
Original Works.
Restoring the ruined Peddinayudu tank of Chennarowpalem in Nandigáma taluk.

	RS.
Estimate	35,000

2. This sanction is registered as No. 125 I. of 1901–1902.

3. The attention of the Superintending Engineer will be drawn to the paragraph 2 of the note by the Chief Engineer for Irrigation.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, II Circle, with plans and estimates.
" Examiner, Public Works Accounts.

IRRIGATION.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. *Spare copies*

G.O., No. 17 I., 7th January 1902.

JANUARY.

Inspection Notes

The — of the Chief Engineer for Irrigation for December 1901 of the Anantapur district, communicated to the Revenue Department and the Superintending Engineer, III Circle, for information.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

Read—the following paper :—

No. 264 I.

Notes of Inspection by the Chief Engineer for Irrigation from 6th to 17th December 1901.

Anantapur.—I regret I have been as yet able to see so little of this district, but I have seen enough to be able to say that it requires special investigation as regards irrigation and special treatment afterwards. If the Commission sanctions the detailed investigation of the proposed Bellary-Tungabhadra and Nellore-Tungabhadra projects, and sufficient compensating water is brought into the Pennair at some future time as the result of investigation, the future possibilities of irrigation in this district and the neighbouring district of Cuddapah will be much improved. By passing a sufficiency of water into the Pennair, the upper part of that river and its branches may be freely drawn on for local use. For instance, in Anantapur a project has been proposed, called the Rankota project. The drainage area of the river above the site of the proposed anicut is 1,100 square miles. The average rainfall of an ordinary year is 25 inches; with a run-off of 20 per cent. the discharge at this point would be 12,000 millions cubic feet, or sufficient for 240,000 acres of dry crop irrigated.

2. In the Ceded districts, where good crops of cholam and ragi can be grown and are the food of the people, it appears to me a mistake to try and foster the irrigation of rice. Irrigation of dry crops is already practised both under wells and tanks, and as the supply of water is limited, dry crop alone should be irrigated under new projects. If rice is allowed, it should be on the condition that in bad years the water will be taken to extend the area of dry crop irrigated. Water for 1 acre of rice is sufficient for 4 acres of dry crop.

3. If these districts are to be partially protected against drought, it can only be so by the irrigation of dry crop and by a large extension of well irrigation. Under existing tanks there is now some irrigation of dry crop and the reasons given me for the practice not extending are: (1) under tanks all available land is brought under wet and charged as wet assessment; (2) because dry lands are on too high a level compared with the tank; (3) when water is used for dry land, a water-rate is charged, which nearly equals the regular wet assessment; (4) dry land once watered must always be watered. It cannot then be converted to dry again without loss. The soil becomes compact and hard and requires irrigation to soften it. As far as I have been able to judge, an extra Rs. 1½ or Rs. 1¾ tax for watering an acre of dry crop could be easily borne. One-acre rice brings, say, Rs. 4 water-rate; its equivalent 4 acres dry would bring, say, Rs. 5; the extra rupee may be taken as the extra cost of the distributary for the larger area.

4. Well irrigation is not extending very rapidly, not nearly so rapidly as desirable. There is plenty of sub-soil water, not perhaps everywhere but over large areas, that could be advantageously utilized. Since [illegible] it would appear that taccavi advances have been made for [illegible] wells new and repairs. Detailed figures for each taluk have been asked for. The Tahsildar of Gooty, who has made some study of the subject, informed me that the chief reason why wells do not increase in number is the poverty of the ryots. A well in rock costs Rs. 300 to Rs. 500 and even more, and

Rs. 500 is required for preparing the land for irrigation and for three pairs of bulls—the two together is quite beyond the means of the ordinary ryot. Wells in black-cotton soil have to be made deeper than in either the red soil or alluvial deposit and the water is sometimes said to be brackish. This would probably be got over by putting down a bore hole in the centre of the well to 20 feet or more in depth. The Tahsildar is of opinion that a special officer is required in the district, say, of the standing of a Deputy Collector, whose business it would be to foster the extension of well irrigation and to advise the ryots on the best way of laying out the taccavi loans. I have no doubt that a special officer is required and that the question will be considered by the Commission. But I am also of opinion that Government must be prepared to spend a good deal of money on well irrigation in backward districts, such as Anantapur, without much hope of profit if the system is to extend, as it has done, for instance, in Coimbatore, where 300,000 acres are now irrigated under wells. Wells may partially or even altogether fail in years of drought, but they give bumper harvests in ordinary years and strengthen the position of the ryot so much that he is able to pass through a time of exceptional drought without being obliged to resort to relief works. An inspection of areas under wells and of the neighbouring areas depending on rain only is sufficient to show the advantage of irrigating under wells.

5. In Anantapur sub-soil water is generally found in black soils from 36 to 42 feet below surface (that is, away from rivers); in red soils 24 to 32 feet; and in alluvial 12 to 15 feet. A well may irrigate from 3 to 5 acres. The annexed diagram gives the areas occupied, cultivated and irrigated in the district in the year 1898-99.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

23rd December 1901.

Order—No. 17 I., dated 7th January 1902.

Communicated to the Revenue Department and the Superintending Engineer, III Circle, for information.

(True Extract.)

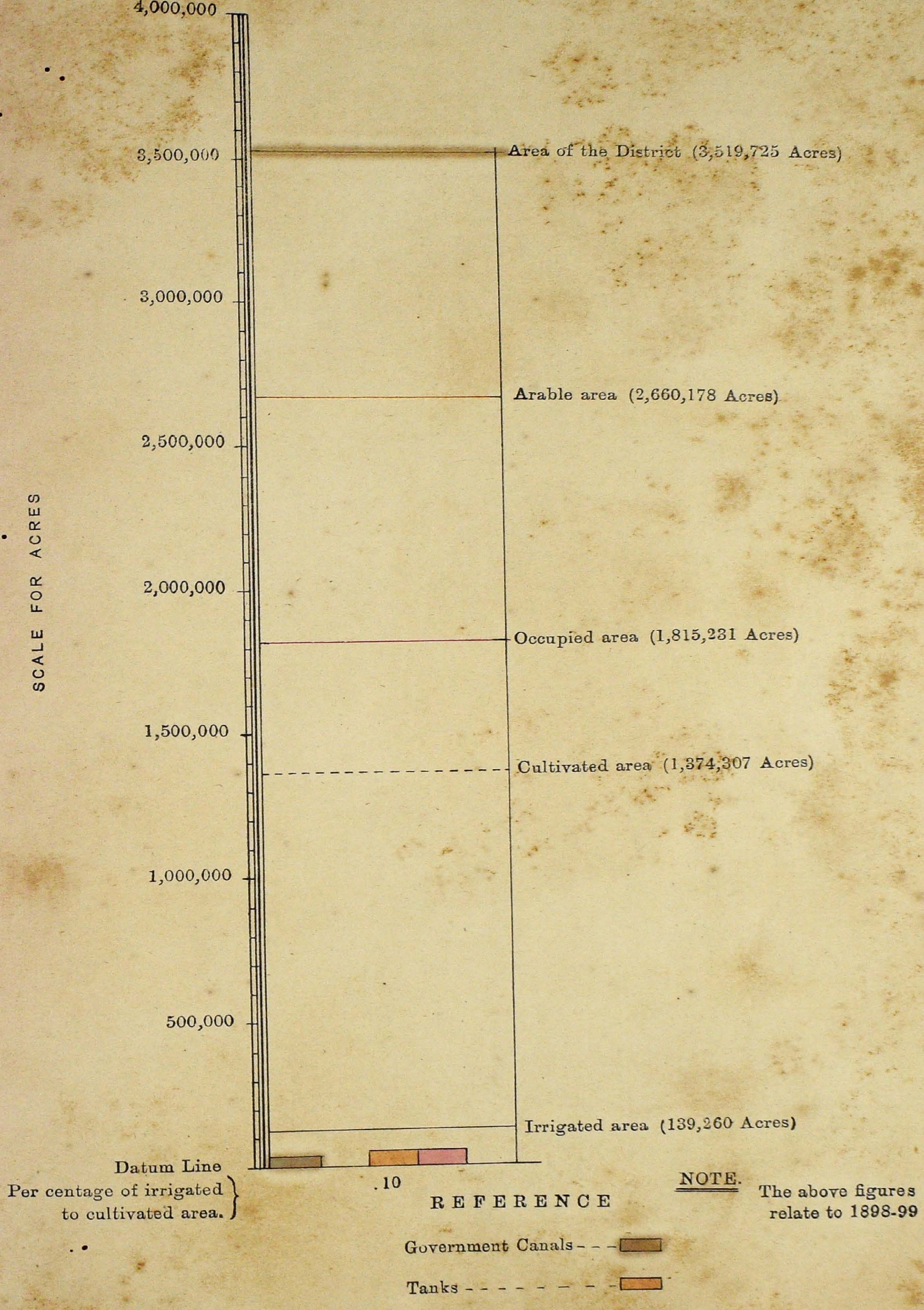
(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, III Circle.
" Revenue Department.

DIAGRAM

SHOWING AREAS OCCUPIED, CULTIVATED & IRRIGATED IN

ANANTAPUR DISTRICT



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Zinco., Survey Office, Madras.
1902

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

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G.O., No. 24 I., 9th January 1902.

JANUARY.

Statements of Navigation Receipts and Charges of the Kistna Delta System

Note by the Chief Engineer for Irrigation on the — for 1900-1901 submitted by the Superintending Engineer, II Circle, recorded.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers:—

From Colonel C. C. RAWSON, R.E., Superintending Engineer, II Circle, to the Chief Engineer for Irrigation, dated Bezwada, 8th October 1901, No. 262 I.

I have the honour to forward herewith statement of navigation receipts and charges appertaining to the Kistna Delta System for 1900–1901.

ENCLOSURES.

COMPARATIVE Statement showing the Charges and Receipts of Navigation of Kistna Delta for 1897–98, 1898–99, 1899–1900 and 1900–1901.

Particulars.	Official year 1897–98.	Official year 1898–99.	Official year 1899–1900.	Official year 1900–1901.
Charges.	RS.	RS.	RS.	RS.
Lock and boat establishment	6,167	11,610	12,303	11,535
Direct charges for repairs	48,781	36,449	31,388	11,353
Indirect charges	32,264	25,354	30,909	32,516
Interest on capital outlay	19,647	19,735	19,942	20,381
Total ..	1,06,859	93,148	94,542	75,785
Receipts.				
Annual license for cargo boats	2,319	5,742	5,329	6,313
,, ,, for passenger boats	825	2,780	2,637	2,749
,, ,, for miscellaneous boats	189	250	..	..
Six weeks' license on cargo boats .. .. }				
,, ,, on passenger boats .. .. }	18,719	25,006	16,578	19,469
,, ,, on miscellaneous .. .. }				
,, ,, on rafts	929	958	1,702	1,113
Warfage fees	..	11,776	6,969	7,881
Demurrage	..	..	87	99
Registration	..	..	393	324
Numbering fees	..	..	48	58
Fines	..	45	9	16
Miscellaneous	..	..	..	55
	22,981	46,557	33,752	38,077
Rent for staff boats	1,648	2,012	1,790	2,008
,, for paddle boats	2	1	3	6
,, boat basin	167	138	90	112
,, for plots	2,854	1,929	2,879	2,368
Earnings of steamer	476	75	10	48
Sale-proceeds of navigation plant	..	89	..	..
Profits on punt and steamer account manufacture	..	..	..	1,063
Total ..	28,128	50,801	38,024	43,682
Add—Balance deficit ..	78,731	42,347	56,518	32,103
Grand Total ..	1,06,859	93,148	94,542	75,785

A.—STATEMENT of Receipts and Charges in the Kistna Delta Navigation for the year 1900–1901.

Receipts for 1900–1901.		Charges for 1900–1901.	
Description.	Amount.	Description.	Amount.
	RS.		RS.
1. Annual license for cargo boats	6,313	1. Boat establishment	880
,, ,, for passenger boats, 1st and 2nd class	2,749	2. Lock ,, ...	10,655
2. Six weeks' license on cargo boats, passenger boats and miscellaneous boats	19,469	3. Repairs to locks and lock weirs	7,458
3. Six weeks' license on rafts	1,113	4. Navigation buildings—	
Wharfage fees	7,881	(a) Improvements	..
Demurrage	99	(b) Repairs	1,639
Registration	324	5. Towpath maintenance	1,160
Numbering fees	58	6. Dredging	498
Fines	16	7. Miscellaneous including any charges not appertaining to the above items ..	598
Miscellaneous	55	8. Share of canal maintenance	32,516
Rent for staff boats	2,008	9. Miscellaneous general charges	..
,, for paddle boats	6	10. Interest for the year on capital outlay on navigation works at 4 per cent. on Rs. 5,04,919.	20,196
,, for boat basin	112	Interest for the year on capital outlay on navigation works at 2 per cent. on Rs. 9,248 ..	185
,, for plots	2,368		
Earnings of steamer	48		
Profits on punt and steamer account maunfacture	1,063		
Total ..	43,682		
Balance deficit	32,103		
Total ..	75,785	Total ..	75,785

Abstract of Memorandum.

A (1).—STATEMENT showing Capital Outlay on Navigation Works proper of the Kistna District for the year 1900–1901.

Section of delta.	To end of 1899–1900.	Outlay in 1900–1901.	Total.
	RS.	RS.	RS.
Eastern section	1,83,309	4,519	1,87,828
Western ,, ...	3,21,610	4,729	3,26,339
Total ..	5,04,919	9,248	5,14,167

B.—STATEMENT showing the Revenue obtained in licensing boats in the Kistna Delta from 1898–99 to 1900–1901.

—	1898–99.					1899–1900.					1900–1901.				
	Class.	Total number.	Tonnage.	Number of passengers	Amount of license.	Class.	Total number.	Tonnage.	Number of passengers	Amount of license.	Class.	Total number.	Tonnage.	Number of passengers.	Amount of license.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
					RS.					RS.					RS.
1. Annual license on cargo boats	..	..	..	..	5,742	..	..	..	..	5,329	..	..	..	..	6,313
Annual license on passenger boats	..	..	..	..	2,780	..	..	..	..	2,637	..	..	..	..	2,749
Annual license on miscellaneous including private and pleasure boats, etc. ..	..	..	..	..	250	..	..	..	..	..	..	..	..	..	..
2. Six weeks' license on cargo boats, passenger boats and miscellaneous	..	..	..	..	25,006	..	..	..	..	16,578	..	..	..	..	19,469
3. Rafts	..	..	..	..	958	..	..	..	..	1,702	..	..	..	..	1,113
Wharfage fees	..	..	..	..	11,776	..	..	..	..	6,969	..	..	..	..	7,881
Demurrage	..	..	..	..	..	..	..	..	..	87	..	..	..	..	99
Registration	..	..	..	..	..	..	..	..	..	393	..	..	..	..	324
Numbering fees	..	..	..	..	..	..	..	..	..	48	..	..	..	..	58
Fines	..	..	..	..	45	..	..	..	..	9	..	..	..	..	16
Miscellaneous	..	..	..	..	..	..	..	..	..	..	..	..	..	..	55
Total ..	..	..	..	..	46,557	..	..	..	..	33,752	..	..	..	..	38,077
Rent for staff boats	..	..	..	..	2,012	..	..	..	..	1,790	..	..	..	..	2,008
,, for paddle boat ..	..	..	..	..	1	..	..	..	..	3	..	..	..	..	6
,, for boat basin	..	..	..	..	138	..	..	..	..	90	..	..	..	..	112
,, on plots	..	..	..	..	1,929	..	..	..	..	2,379	..	..	..	..	2,368
Steamer earnings	..	..	..	..	75	..	..	..	..	10	..	..	..	..	48
Sale-proceeds of navigation plant	..	..	..	..	89	..	..	..	..	..	..	..	..	..	..
Profits on punt and steamer account manufacture ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,053
Grand Total ..	..	..	..	..	50,801	..	..	..	..	38,024	..	..	..	..	43,682

C.—STATEMENT showing the Expenditure on Repairs of Navigable Canals in the Kistna District for 1900–1901.

Names of canals.	Navigation repairs proper.						Repairs to navigable canals.						
	Locks and lock weir repairs.	Navigation buildings.	Clearing towpaths.	Dredging.	Miscellaneous.	Total.	Repairs to canal banks.	Silt-clearing in canals.	Repairs to masonry works.	Dredging.	Miscellaneous.	Total.	Total of columns 7 and 13.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Kistna Eastern Delta.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
1. Main canal	549	46	..	498	..	1,093	204	391	352	..	..	947	2,040
2. Ellore canal	..	..	59	..	..	59	2,718	1,630	762	160	..	5,270	5,329
3. Masulipatam canal ..	1,766	757	158	..	..	2,681	3,678	11,763	— 31	..	..	15,410	18,091
4. Bank canal	5	..	..	..	..	5	..	..	80	..	..	80	85
5. Pamerru junction canal ..	..	..	..	..	..	..	60	403	..	..	..	463	463
6. Pulleru canal	72	117	922	..	..	1,111	1,098	568	300	..	..	1,966	3,077
7. Polraz canal	86	602	21	..	..	709	1,530	2,481	29	..	..	4,040	4,749
8. Bantumalli canal ..	1,126	29	..	..	..	1,155	1,576	5,616	45	..	..	7,237	8,392
9. Ryves' canal	..	..	..	..	..	..	850	983	216	..	..	2,049	2,049
Total ..	3,604	1,551	1,160	498	..	6,813	11,714	23,835	1,753	160	..	37,462	44,275
Kistna Western Delta.													
1. Main canal	108	..	..	..	154	262	773	16,305	254	..	1,499	18,831	19,093
2. Nizampatam canal ..	656	11	..	..	110	777	..	3,276	66	..	2,515	5,857	6,634
3. Bank canal	1,093	24	..	..	90	1,207	2,519	1,372	103	..	3,891	7,885	9,092
4. Commamur canal ..	1,997	53	..	..	244	2,294	80	21,518	1,246	..	5,045	27,889	30,183
Total ..	3,854	88	..	..	598	4,540	3,372	42,471	1,669	..	12,950	60,462	65,002
Grand Total ..	7,458	1,639	1,160	498	598	11,353	15,086	66,306	3,422	160	12,950	97,924	1,09,277

Abstract of Statement C.

Names of canals.	Navigation repairs proper, column 7 of statement C.	Repairs to navigable canals, column 13 of statement C.	Proposed length of canals.		Length opened to navigation.		Proportion of column 3 chargeable to navigation.		Total of columns 2 and 7.
							Percentage.	Amount.	
1	2	3	4		5		6	7	8
Kistna Eastern Delta.	RS.	RS.	MS.	CH.	MS.	CH.		RS.	RS.
Main canal	1,093	947	0	51	0	51	One-third or 33 per cent.	313	1,406
Ellore canal	59	5,270	40	0	40	0		1,739	1,798
Masulipatam canal	2,681	15,410	49	7	49	7		5,085	7,766
Bank canal	5	80	..		..			26	31
Pamerru junction canal	..	463	0	40	0	40		153	153
Pulleru canal	1,111	1,966	26	26	17	60		649	1,760
Polraz canal	709	4,040	26	0	26	0		1,333	2,042
Bantumalli canal	1,155	7,237	27	5	27	5		2,388	3,543
Ryves' canal	..	2,049	..		..			676	676
Total ..	6,813	37,462	169	49	161	3		12,362	19,175
Kistna Western Delta.									
Main canal	262	18,831	13	0	13	0		6,277	6,539
Nizampatam canal	777	5,857	27	78	27	78		1,953	2,730
Bank canal	1,207	7,885	46	8	46	08		2,628	3,835
Commamur canal	2,294	27,889	59	0	59	0		9,296	11,590
Total ..	4,540	60,462	146	6	146	6		20,154	24,694
Grand Total ..	11,353	97,924	315	55	307	9		32,516	43,869

D.—MEMORANDUM showing the Offences against Bye-laws during the official year 1900–1901 and Punishments inflicted in the Kistna Delta.

—	Rule 15.		Rule 29.		Rule 34.		Rule 39.		Rule 41.		Rule 36.		Bye-law No. 49.		Bye-law No. 51.		Rule 50.	
	Number of boat.	Number of days.	Number of boat.	Number of days.	Number of boat.	Number of days.	Number of boat.	Number of days.	Number of boat.	Number of days.	Number of boat.	Number of days.	Number of boat.	Number of days.	Number of boat.	Number of days.	Number of boat.	Number of days.
Kistna Eastern.																		
Passenger boat	5 K	10	* 114 K T	3	45 K 1014 K 2 K 5 K 50 K 10 K 1811 G 10 K	1 5 5 4 4 4 4 7	46 K	3	46 K	3	961 K	15	..	..	..	..	..	..
Steamer	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	* 988 K	4
Kistna Western.																		
Cargo boat	..	..	..	..	..	..	..	..	..	..	..	..	117 K 1155 K 351 G 1527	2 2 2 2	..	..	..	..
Passenger boat	..	..	..	..	..	..	..	..	..	..	..	..			114 K T	10	..	..

* Six weeks' licenses. The rest annual licenses.

To the Examiner, Public Works Accounts, dated 15th October 1901, No. 205 K.S.
From the " " " " 12th November " " 3421 B./A.

No. 267 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, II Circle, submits the accompanying statements showing the navigation receipts and charges of the Kistna delta system for 1900–1901. After carrying out the corrections pointed out by the Examiner, Public Works Accounts, the total receipts amount to Rs. 43,682 and the charges to Rs. 55,404 excluding interest * on the capital outlay incurred on the navigation works of the system.

* Rs. 20,381.

23rd December 1901.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

ORDER—No. 24 I., dated 9th January 1902.

Recorded.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, II Circle.
" Examiner, Public Works Accounts.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

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G.O., No. 25 I., 9th January 1902.

JANUARY.

Keelanur Tank, Chingleput Division

The estimate of Rs. 5,760 for improving the vented weir and revetting the bund of the —, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers:—

From the Superintending Engineer, V Circle, dated 3rd Dec. 1901, No. 420 E.I.

Enclosure.

Report to accompany the Estimate for improvements to the vented weir in Keelanur tank M.W./P.W.D. No. 152, Tiruvallúr taluk.

	RS.
Amount of estimate	5,760

There is a deep scour in rear of the weir which has already commenced to undermine the structure. Unless immediate steps are taken the whole structure will be exposed to serious damage and the bund to breaches. As the drop is very great and the soil sandy there is nothing to prevent serious damages occurring, and in order to prevent this, it is proposed to build a cushioned apron to protect the masonry as shown in the accompanying plan modified by the Superintending Engineer.

It is also proposed to revet the inner slope of the tank bund from section 8 to 11 with rough stone laterite 1½ feet thick over a gravel backing of 6 inches making the top one foot above M.W.L. The existing revetment is also to be raised to that level throughout its length—*vide* provision in the estimate.

Sections 7 to 8 and 11 to 12 will be planted with velal grass, which is considered sufficient to protect the bund.

All works will be carried out in accordance with the standard specifications of the Public Works Department.

(Signed) H. A. MOSS,
Ex. Engr., Chingleput Divn.

13th November 1901.

No. 266 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, V Circle, submits an estimate of Rs. 5,760 for improving the vented weir and revetting the bund of the Keelanur tank, Chingleput district, which irrigates 506 acres yielding a revenue of Rs. 2,354. The proposed aprons of the weir have been altered in this office to water cushions and the wing walls extended as shown on the plan. These alterations do not affect the amount of the estimate which is recommended for sanction.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

23rd December 1901.

ORDER—No. 25 I., dated 9th January 1902.

The following estimate is sanctioned :—

Provincial.
Irrigation.
43. Minor Works and Navigation.
Class IV—Other Minor Works for which neither Capital nor Revenue nor Individual Accounts are kept.
(*a*) In charge of Public Works Department.
Original Works.
Chingleput Division.
Improvements to vented weir and revetting the bund of the Keelanur tank No. 152 in the list of Minor Works, Public Works Department, appended to G.O., No. 407 I., dated 6th July 1887.

	RS.
Estimate	5,760

2. This sanction is registered as No. 131 I. of 1901–1902.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" " " Tank Restoration Scheme.
" Superintending Engineer, V Circle.
" Examiner, Public Works Accounts.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

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G.O., No. 26 I., 9th January 1902.

JANUARY.

Statements of Navigation Receipts and Charges of the Godavari Delta System

Note by the Chief Engineer for Irrigation on the — for 1900-1901, submitted by the Superintending Engineer, I Circle, recorded.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers:—

From C. J. USSHER, Esq., Superintending Engineer, I Circle, to the Chief Engineer for Irrigation, dated Waltair, 24th October 1901, No. 2760 G.

I have the honour to submit herewith the usual Annual statements A, A-I, B, C and D showing the navigation receipts and charges of the Gódávari system of canals for the official year 1900–1901.

2. The subjoined statement shows the receipts and charges of the present as compared with those of the previous year:—

—	1900–1901.	1899–1900.	Increase.	Decrease.
Receipts.	RS.	RS.	RS.	RS.
1. License fees for passenger boats	7,896	8,276	..	380
2. ,, for cargo boats	17,481	19,796	..	2,315
3. ,, for miscellaneous including private and pleasure boats, duplicate license fees, rents of canal flats, etc. ..	1,207	1,286	..	63
4. Tolls on all kinds of boats and rafts	65,309	63,405	1,904	..
5. Rents of staff boats	2,200	2,574	..	342
6. Approximate navigation receipts from Kovur-Munjair junction canal credited to Incorporated Local and 43. Minor Works and Navigation	— 200	— 200	..	..
7. Profit on boat office	3,801	108	3,740	..
8. Refunds of navigation receipts	— 32	— 59	27	..
9. Rents of canal berms	236	391	..	155
Total ..	97,898	95,577	5,671	3,255
Charges.				
10. Navigation establishment, including Boat Superintendent ..	22,672	22,776	..	104
11. Lock and lock weir repairs	18,786	22,626	..	3,840
12. Navigation buildings	579	1,068	..	489
13. Towpath maintenance	..	2	..	2
14. Dredging	4,803	1,495	3,308	..
15. Share of canal maintenance	24,494	10,545	13,949	..
16. Repairs to staff boats	1,096	2,261	..	1,165
17. Miscellaneous, including any charges not appertaining to the above items	2,896	3,258	..	339
Total ..	75,326	64,031	17,257	5,939

Receipts.

1. The decrease on items 1, 2 and 3 is partly balanced by increase on item 4, as the owners of boats chose to take 6 weeks' licenses in preference to annual licenses.

2. The increase on item 4 is due to the decrease on items 1, 2 and 3.

3. The decrease on item 5 is due to the staff boats Nos. 17, 20 and 23 being idle for a considerable part of the year.

4. The increase on item 7 is due to more frequent demands for steamers during the heavy freshes of the year than in the previous year.

5. The increase on item 8 is small and calls for no remarks.

6. The decrease on item 9 is due to the length of canal berms occupied by the Local Fund department and other private parties during the year being less than in the previous year.

Charges.

7. The decrease on item 10 is small and calls for no remarks.

8. The decrease on item 11 is due to less having been expended on repairs to the locks and weirs during the year.

9. The decrease on item 12 is due to fewer repairs having been carried out to navigation buildings during the year than in the previous year.

10. The increase on item 14 is due to the large amount of dredging work required on account of the accumulation of silt in canals owing to the unusual freshes during the year.

11. Item 13 calls for no remarks.

12. The increase on item 15 is due to more work having been done owing to flood damages.

13. The decrease on item 16 is due to fewer repairs to staff boats being required during the year.

14. The decrease on item 17 is due to less repairs having been carried out to cross drainage works during the year than in the previous year.

ENCLOSURES.

A.—STATEMENT of Receipts and Charges of Gódávari Delta Navigation for the official year 1900–1901.

Receipts for the official year 1900–1901. Description.	Amount.	Charges for the official year 1900–1901. Description.	Amount.
	RS.		RS.
1. License fees for passenger boats	7,896	1. Navigation establishment, including Boat Superintent	22,672
2. " for cargo boats	17,481	2. Lock and lock weir repairs	18,786
3. " for steamers, private ..	..	3. Navigation buildings	579
4. " for miscellaneous including private boats and duplicate license fees ..	712	4. Towpath maintenance	..
5. Tolls on Government steamers and dredgers.	..	5. Dredging	4,803
6. ,, on passenger boats	8,410	6. Share of canal maintenance	24,494
7. ,, on cargo boats	39,015	7. Repairs of staff boats	1,096
8. ,, on private steamers	72	8. Charges for painting numbers on boats ..	208
9. ,, on miscellaneous	138	9. Miscellaneous including charges not appertaining to the first 8 items	2,688
10. ,, on rafts	17,746		75,326
11. Rents collected from staff boats	2,200	Interest at 2 per cent. on capital outlay during the year on navigation works	..
12. Fees collected for painting numbers on boats.	423	Interest for the year on capital outlay on navigation works proper to end of 1899–1900.	42,239
13. Approximate navigation receipts from Kovur-Munjair junction canal credited to Incorporated Local and 43. Minor Works and Navigation	— 200		
14. Profit on Boat office at end of 1900–1901 ..	3,801		
15. Refunds of navigation receipts	— 32		
16. Rents of canal berms	236		
17. Rents of Government punts and wagons ..	97,898		
Loss ..	19,667		
Total ..	1,17,565	Total ..	1,17,565

NOTE.—The figures in the Traffic statements already submitted were according to the accounts for March 1901, and those in these statements are according to the supplemental accounts for March 1901; hence the difference.

A-I.—STATEMENT of Capital Outlay on Navigation Works proper of the Gódávari Delta from the year 1870–71 inclusive.

Section of delta.	To end of 1899–1900.	For 1900–1901.	Total.
	RS.		RS.
Eastern delta	3,47,764	..	3,47,764
Central ,, ...	2,58,174	..	2,58,174
Western ,, ...	4,49,832	..	4,49,832
Total ..	10,55,770	..	10,55,770

B.—STATEMENT showing the Navigation Receipts for the official year 1900–1901.

Item number.	Particulars.	Official year 1899–1900. Class.	Total number.	Measured tonnage licensed at 50 cubic feet per ton.	Number of passengers licensed to carry.	Amount of license fees and tolls.	Official year 1900–1901. Class.	Total number.	Measured tonnage licensed at 50 cubic feet per ton.	Number of passengers licensed to carry.	Amount of license fees and tolls.
1	2	3	4	5	6	7	8	9	10	11	12
1	Licensed fees for passenger boats	I	..	..	..	..	I	..	..	..	..
2	" for "	II	115	2,508	5,870	8,276	II	103	2,462	4,539	7,896
3	" for cargo boats	..	322	7,736	..	19,796	..	328	6,061	..	17,481
4	" for steamers, private	..	..	..	..	..	..	..	..	..	..
5	" for miscellaneous (including private) pleasure boats and duplicate license fees, tolls on Government steamers and dredgers	..	..	..	..	761	..	..	..	..	712
6	Tolls on passenger boats	..	..	..	..	6,826	..	..	..	..	8,410
7	" on cargo boats	..	..	..	..	35,489	..	..	..	..	39,015
8	" on private steamers	..	..	..	..	72	..	..	..	..	72
9	" on miscellaneous	..	..	..	..	174	..	..	..	..	138
10	" on rafts	..	..	..	..	20,917	..	..	..	..	17,746
11	Rents collected from staff boats	..	..	..	..	2,574	..	..	..	..	2,200
12	Fees collected for painting numbers on boats	..	..	..	..	437	..	..	..	..	423
13	Approximate navigation receipts from Kovur-Munjair junction canal credited to Incorporated Local and 43, Minor Works and Navigation	..	..	..	..	— 200	..	..	..	..	— 200
14	Profit on Boat office	..	..	..	..	— 146	..	..	..	..	3,801
15	Refunds on navigation receipts	..	..	..	..	— 61	..	..	..	..	— 32
16	Rents on canal berms	..	..	..	..	304	..	..	..	..	236
17	" on Government punts and wagons	..	..	..	..	15	..	..	..	..	..
	Total ..	..	437	10,244	5,870	* 95,234 95,609	..	431	8,523	4,539	97,898

* Shown in statement printed with G.O., No. 371 I., dated 2nd May 1901.

C.—STATEMENT showing the total Maintenance Charges on Navigable Canals of the Gódávari Delta for the year 1900–1901.

Description.	Total charges for 1900–1901.	Debitable to Navigation.		Debitable to Navigation.	
		Rate.	Amount.	Rate.	Amount.
	RS.		RS.		RS.
1. Navigation establishment	22,672	Whole.	22,672	..	..
2. Locks and lock weir repairs	18,786	Do.	18,786	..	..
3. Navigation buildings	579	Do.	579	..	..
4. Towpath maintenance	..	..	..	..	..
5. Dredging	4,803	Whole.	4,803	..	..
6. Share of canal maintenance (a)	97,974	One-fourth.	24,494	..	73,480
7. Repairs to staff boats	1,096	Whole.	1,096	..	..
8. Charges for painting numbers on boats	231	Do.	208	..	..
9. Miscellaneous (including charges not appertaining to the first 8 items) (b)	10,753	One-fourth.	2,688	..	8,065
Total ..	1,56,894	..	75,326	..	81,515

(a) This amount represents expenditure on the following items as laid down in G.O., No. 460 I. of 6th Aug. 1888 :—

(i) Repairs to canal banks (one-fourth of this is chargeable to Navigation).
(ii) Silt clearance (one-fourth of this is chargeable to Navigation).
(iii) Mile and coolies (one-fourth of this is chargeable to Navigation).

(b) This item represents expenditure on repairs to masonry works other than locks and weirs.

D.—Memorandum showing Offences against Navigation Rules during the official year 1900–1901.

Nature and description of boat.	Rule No. 15 for carrying a greater number of passengers than allowed.		Rules Nos. 26 and 33 for having no license on boat and no competent man in charge.		Rule No. 34 for not having a sufficient free board.		Rule No. 35 for carrying more passengers than the boat is licensed to carry and carrying cargo on the roof.		Rule No. 36 for not having a person on board competent to steer and manage vessel.		Rule No. 37 for not exhibiting light between sunset and sunrise.		Rule No. 39 for boats going with the current not keeping out of the way if other vessel passing in the canal.	
	Boat number.	Number of days stopped.	Boat number.	Number of days stopped.	Boat number.	Number of days stopped.	Boat number.	Number of days stopped.	Boat number.	Number of days stopped.	Boat number.	Number of days stopped.	Boat number.	Number of days stopped.
		M. D.				DAYS.		DAYS.		DAYS.		DAYS.		
Passenger boats.	1717	1 13							1678 L.	5	167 G.W.	1		
	279 G.W.	0 3			1893	13					324 G.W.	1		
	1601 G.	0 1			1684	16					230 G.W.	1		
	1602 G.	0 1			50	3	350	15			1804	30		
	56 G.W.	0 7			407 G.	3	1794	5			324 G.W.	1		
	1502	0 7					1829	3			31 G.W.	1		
	386 G.	0 5					1862	7			210 G.W.	1		
											209 G.W.	1		
											334 G.T.	7		
											1869	5		
Cargo boats ..									1882	5	1236 K.	1		
									1700	5	1808	15		
									6894 T.T.	5	1543	3		
									1653 L.	3				
									1562	3				
									1866	3				
									1598	3				

Nature and description of boat.	Rule No. 40 for not lowering the sails while passing through a masonry aqueduct.		Rule No. 41 for not having maintained in proper state of repair and cleanliness.		Rule No. 43 for non-production of license when asked by a canal officer.		Rule No. 47 for not having the boat numbered.		Rule No. 49 for unloading cargo or stocking goods on tow-paths or masonry.		Rule No. 50 for interfering with lock.		Rule No. 4 for carrying passengers without license.		Obstructing traffic on Kovur-Munjair junction canal.	
	Boat number.	Number of days stopped.	Boat number.	Number of days stopped.	Boat number.	Number of days stopped.	Boat number.	Number of days stopped.	Boat number.	Number of days stopped.	Boat number.	Number of days stopped.	Boat number.	Number of days stopped.	Boat number.	Number of days stopped.
						DAYS.				DAYS.		DAYS.		DAYS.		DAYS.
Passenger boats.					1685	2			236 G.W.	3	1507 G.	2	209 G.W.	7	11003	14
									120 G.W.	1	1859	4	210 G.W.	7	1109	10
									57 G.W.	1	1795	5				
									1501 G.	2						
									1815 G.	1						
									1827	3						
									1507 G.	3						
									57 G.W.	1						
									1599	2						
									1735	2						
									31 G.W.	2						
									1506 G.	1						
									1578 L.	5						
									1611	5						
Cargo boats ..																
					1576 G.	1			324 G.	5			50 G.W.	7		
					1517 G.	2			1526	3			2 G.W.	15		
					387 G.	2					80 G.W.	7				
					214 G.	7					51 G.	2				
											108 G.W.	1				

To the Examiner, Public Works Accounts, dated 28th Oct. 1901, No. 88 G.D.
From the " " " " 12th Nov. " No. 3410 B./A.
From the Superintending Engineer, I Circle, dated 14th Nov. 1901, No. 2931 G.

No. 268 I.

Note by the Chief Engineer for Irrigation.

The accompanying statements submitted by the Superintending Engineer, I Circle, show the navigation receipts and charges of the Gódávari delta system for the last official year 1900–1901. After carrying out the corrections pointed out by the Examiner, Public Works Accounts, the total receipts amount to Rs. 97,898 including refunds of navigation receipts, and the charges to Rs. 1,17,565 resulting in a loss of Rs. 19,667 if interest (Rs. 42,239) be included, or a profit of Rs. 22,572 if interest be excluded.

23rd December 1901.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

ORDER—No. 26 I., dated 9th January 1902.

Recorded.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, I Circle.
" Examiner, Public Works Accounts.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

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G.O., No. 27 I., 9th January 1902.

JANUARY.

Right Bank of the Akhanda Godavari

The revised estimate of Rs. 11,840 for diverting the — between 19/5 and 20/5 miles, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers:—

From W. C. DEMORGAN, Esq., M.I.C.E., Superintending Engineer, I Circle, to the Chief Engineer for Irrigation, dated Waltair, 28th November 1901, No. 3090 G.W.

I have the honour to forward a revised estimate for diverting the right bank, Akhanda Gódávari, between miles 19–5–6 and miles 20–5–6. The excess amounts to Rs. 4,450.

Of this, Rs. 3,569 is due to land compensation. The Executive Engineer reports that, owing to the urgency of the work, the figures for this item were entered without reference to the Revenue Department as directed in Circular Memo. No. 10 G., dated 7th May 1897. Gutala is a zamindari village which may account for the average rate of compensation being higher than was expected.

2. Excess on earthwork is due to necessity for filling old pits at time of diversion and filling spaces between the old and new banks, where accumulation and percolation of water might have caused slips.

3. Pipes were put in at longest diversion to drain the space between old and new banks and, in case of a high flood, to allow water to rise gradually on the new earthwork.

The space between the village and the river is very narrow, and every precaution had to be taken to prevent slipping of the margin.

4. Under these circumstances, I have the honour to recommend the estimate for sanction.

No. 272 I.

Note by the Chief Engineer for Irrigation.

In G.O., No. 341 I., dated 15th April 1901, an estimate of Rs. 7,390 was sanctioned for diverting the right bank of the Akhanda Gódávari between 19/5 and 20/5 miles. The Superintending Engineer, I Circle, now submits a revised estimate, amounting to Rs. 11,840, involving an excess of Rs. 4,450 over the original estimate, which is made up of the following items:—

		RS.
(1) Inadequate provision in the original estimate for land compensation	...	3,569
(2) Extra earthwork found necessary	... ...	1,044
(3) Fixing pipes	... ...	210
(4) Petty supervision and contingencies	... ...	17
	Total ...	4,840
Saving effected in the construction of dykes	... ...	390
	Net excess ...	4,450

Item (1).—The Executive Engineer reports that, owing to the urgency of the work, the figures for land compensation were entered in the original estimate without reference to the Revenue Department and that the revised estimate is based on the information obtained from the Deputy Collector, Agency Division.

Item (2)—was due to the necessity for filling the old pits along the line of diversion and spaces between the old and new banks to prevent percolation of water and consequent slips.

Item (3).—It is reported that pipes had to be put in at the longest diversion to drain the space between the old and new banks.

With reference to item (1) the undersigned considers that, as there was no particular urgency in the present case, a reference should have been made to the Revenue Department regarding land compensation before submitting the original estimate for sanction. The attention of the Superintending Engineer will be invited to paragraph 2 of G.O., No. 264 W., dated 27th January 1899.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

20th December 1901.

ORDER—No. 27 I., dated 9th January 1902.

The following revised estimate is sanctioned in supersession of the sanction accorded in G.O., No. 341 I., dated 15th April 1901 :—

Provincial.
Irrigation.
43. Minor Works and Navigation.
Class V.—Agricultural Works.
Godávari Western Division.
Original Works.
Diverting the right bank of the Akhanda Gódávari between 19/5 and 20/5 miles.

	RS.
Estimate	11,840

2. This sanction is registered as No. 126 I. of 1901–1902.

3. The attention of the Superintending Engineer, I Circle, will be invited to the concluding sentence of the note by the Chief Engineer for Irrigation.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
„ Superintending Engineer, I Circle, with estimates, etc.
„ Examiner, Public Works Accounts.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras
PUBLIC WORKS.

Recd. } 1902. *Enclosures*

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G.O., No. 29 I., 9th January 1902.

JANUARY.

Superpassage over the Basavanna Channel, Bellary District

The estimate of Rs. 4,900 for constructing a — to carry two drainage channels, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers :—

From the Superintending Engineer, III Circle, dated 25th November 1901, No. 3898 I.

ENCLOSURE.

REPORT to accompany the Estimate for constructing a superpassage for inlets at the head of Basavanna Channel—No. 1, Minor Works, Public Works Department.

	RS.
Amount of estimate	4,900

Two vankas enter the Basavanna channel—one just below the head sluice and another about 3 furlongs lower down. These inlets bring down a large quantity of sand during the rainy season and silt up the Basavanna channel for a length of more than a mile.

It is now proposed to construct a superpassage to carry the vankas over the Basavanna channel direct to the river. A good site was selected for the purpose by Mr. H. E. Clerk, and the two vankas will be diverted to the site by means of cross dams placed across their usual course; the levels admit of such a proposal (*vide* survey).

There is a natural drain leading to the river which shows that, that was the old course of the vanka before the channel was originally excavated. After crossing the channel the vankas will flow along this drain into the river.

Necessary compensation for the land to be acquired for the diversion channel has also been provided.

30th September 1901. (Signed) D. KOIL PILLAI,
Overseer, P.W.D.

5th October 1901. (Signed) G. F. HANDCOCK,
Ex. Engr., Bellary Divn.

No. 257 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, III Circle, submits an estimate of Rs. 4,900 for constructing a superpassage over the Basavanna channel in the Bellary district to carry two drainage channels which at present enter the channel and bring large quantities of silt into it. The estimate may be sanctioned.

18th December 1901. (Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

ORDER—No. 29 I., dated 9th January 1902.

The following estimate is sanctioned :—

Provincial.
Irrigation.
43. Minor Works and Navigation.
Class IV—Other Minor Works for which neither Capital nor Revenue nor Individual Accounts are kept.
(a) In charge of Public Works Department.
Bellary Division.
Original Works.

Constructing a superpassage to carry two drainage channels over the Basavanna channel.

	RS.
Estimate	4,900

2. This sanction is registered as No. 127 I. of 1901–1902.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, III Circle, with plans and estimate.
" Examiner, Public Works Accounts.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. }1902. *Enclosures*

Regd. *Spare copies*

G.O., Nos. 37, 38 I., 10th January 1902.

JANUARY.

Statements showing the Revised Estimates for 1901-1902 and the Budget Estimates for 1902-1903 of Revenue and Expenditure

Forwarding —.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers :—

Statements Nos. I and II showing the revised estimates for 1901–1902 and th budget estimates for 1902–1903 of Revenue and Expenditure.

[*Statement.*

Statement No. I.—Revised Estimate of Revenue and Expenditure for 1901–1902, compared with the Budget Estimate for the year.

Revenue.						Expenditure.					
Major heads.	Fund.	Revised estimate, 1901–1902.	Budget estimate, 1901–1902.	Revised estimate more (+) or less (—) than budget estimate.	Brief explanation of important differences.	Major heads.	Fund.	Revised estimate, 1901–1902.	Budget estimate, 1901–1902.	Revised estimate more (+) or less (—) than budget estimate.	Brief explanation of important differences.
		RS.	RS.	RS.				RS.	RS.	RS.	
XXIX. Major Works (Direct receipts).	Imperial.	3,37,000	3,25,000	+ 12,000	The revised estimate is based on the actuals of the previous year. The increase is anticipated chiefly in the Gódávari and Kistna delta systems.	35. Protective Works (Irrigation).	Imperial.	1,23,000	16,000	+1,07,000	The increase in expenditure represents the additional grant sanctioned by the Government of India in its letters Nos. 67 A. I. and 73 A. I., dated 20th September 1901, and 12th November 1901, communicated with G.O., No. 744/A I., dated 30th September 1901, and G.O., No. 3406/A W., dated 11th December 1901, respectively.
Portion of land revenue due to irrigation.	Do.	75,67,000	72,85,000	+2,82,000	The increase occurs under the Gódávari and Kistna delta systems and the Periyár project. The increase of Rupees 1,76,000 in the Gódávari delta system is based on the expectation that the season during the current and ensuing years will be normal and that there will be no decrease in the second crop cultivation as in the previous year. The increase in the Kistna delta is due to the fact that the revised and budget estimates have been fixed with reference to actuals. The increase in the Periyár project is due to the anticipated extension of irrigation under the project.	42. Major Works (Working Expenses).	Do.	15,00,000	15,00,000	..	
						43. Minor Works and Navigation.	Provincial.	31,18,117	30,35,000	+ 83,117	The increase represents the additional grant subsequently sanctioned by the Financial Departmrnt.
						Do.	Local.	12,300	14,000	— 1,700	
XXX. Minor Works and Navigation (Direct receipts).	Provincial.	1,28,000	1,26,000	+ 2,000	....	49. Capital Expenditure not charged to Revenue.	Imperial.	10,22,000	11,50,000	—1,28,000	The decrease represents the surrender accepted by the Government of India in its telegram No. 79/A. I., dated 18th December 1901, communicated with G.O., No. 14 I., dated 7th Jan. 1902.

STATEMENT. No. II.—Budget Estimate of Revenue and Expenditure for 1902-1903, compared with the Revised Estimate for 1901-1902.

Revenue.						Expenditure.					
Major heads.	Fund.	Revised estimate, 1901-1902.	Budget estimate, 1902-1903.	Budget estimate more (+) or less (−) than revised estimate.	Brief explanation of important differences.	Major heads.	Fund.	Revised estimate, 1901-1902.	Budget estimate, 1902-1903.	Budget estimate more (+) or less (−) than revised estimate.	Brief explanation of important differences.
		RS.	RS.	RS.				RS.	RS.	RS.	
XXIX. Major heads (Direct receipts).	Imperial.	3,37,000	3,37,000	..	....	35. Protective Irrigation Works.	Imperial.	1,23,000	(a)	..	
						42. Major Works (Working Expenses).	Do.	15,00,000	(a)	..	
Portion of land revenue due to irrigation.	Do.	7 ,67,000	76,10,000	+ 43,000	The increase occurs chiefly in the Rushikulya and Periyár projects. The increase under the former is due to anticipated assignment for occupation of waste and tank-bed lands which will be disposed of during the current and ensuing years. That under the latter work is due to the anticipated extension of irrigation under the project.	43. Minor Works and Navigation.	Provincial	31,08,117	30,85,000	..	The decrease is due to the Financial Department having curtailed the grant applied for.
						Do.	Local.	12,300	10, 000	..	
XXX. Minor Works and Navigation.	Provincial.	1,28,000	1,28,000	..	....	49. Capital Expenditure not charged to Revenue.	Imperial.	10,22,000	(a)	..	

(a) *Note.*—Imperial grants will be fixed by the Government of India.

8th January 1902.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

No. 11 I.

Note by the Chief Engineer for Irrigation.

Submitted to Government, with reference to G.O., No. 3403 W., dated 20th December 1890.

2. The information regarding the loss of revenue attributable to famine referred to in the Government of India circular communicated with G.O., No. 3189 W., dated 21st November 1901, will be intimated to that Government on its receipt from the Board of Revenue.

8th January 1902.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

ORDER—No. 37 I., dated 10th January 1902.

The above statements will be forwarded to the Government of India, with reference to its Resolution No. 186 A.G., dated 6th December 1890.

[Here enter No. 38 I., dated 10th January 1902.]

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
,, all Superintending Engineers.
,, the Examiner, Public Works Accounts.

ENDORSEMENT—No. 38 I., dated 10th January 1902.

Forwarded.

(By order.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

IRRIGATION.
ACCOUNT.

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G.O., No. 39 I., 10th January 1902.

JANUARY.

Surplus Weir

The estimate of Rs. 1,580 for constructing a — for the Lukulam channel at Thutu-kulam above the Andhavaram regulator, Ganjám division, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers :—

From the Superintending Engineer, I Circle, dated 17th April 1901, No. 458 G.N.

Enclosure.

Report to accompany the estimate for constructing a surplus weir at Thutukulam above item No. 6, Andhavaram regulator, in the Lukulam channel.

	RS.
Amount of Estimate	1,280

About a furlong above the Andhavaram regulator, the Lukulam channel connected with the Ganjám minor rivers system intercepts a drainage area of about 1·05 square miles, and as there is no surplusing arrangement, the right bank usually breaches at this site, and a regular surplus channel has been formed from here by which all the flood water enters the Polaky channel below, silts up the latter, and causes considerable damage to its banks and the Government villages irrigated by it. A surplus weir, if constructed, will prevent these breaches and all subsequent trouble and correspondence. An estimate with a design for the same is accordingly submitted for sanction. The weir will be made 50 feet long as per calculations noted in the plan. Planks between rails are provided to raise water to supply high lands. The work will be carried out in accordance with the standard specifications.

* * * * * *

20th March 1901.

(Signed) M. LOAM,
Ex. Engr., Ganjám Divn.

No. 250 I.

Note by the Chief Engineer for Irrigation.

The Lukulam channel connected with the Ganjám minor rivers system has no surplus weir at present. Its right bank, therefore, often breaches, with the result that the flood water enters the Polaky channel below, silting it up and considerably damaging its banks and the villages commanded by it. The Lukulam channel irrigates 5,270 acres, of which 610 belong to Government, the rest being proprietary and inam lands. The Superintending Engineer, I Circle, now submits an estimate, amounting to Rs. 1,280, for constructing a surplus weir for the Lukulam channel at Thutukulam above the Andhavaram regulator. It is not considered necessary to seek any contribution from the inamdars holding lands under the channel. The estimate is recommended for sanction from Government funds.

2. The design of the weir has been altered so as to make the concrete under the first retaining wall meet the concrete of the apron.

3. The work will probably be completed by the 31st March 1903.

4th December 1901.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

ORDER—No. 39 I., dated 10th January 1902.

The following estimate is sanctioned :—

Provincial.
Irrigation.
43. Minor Works and Navigation.
Class II— Minor Works and Navigation for which Capital and Revenue Accounts are kept.
Ganjám Minor Rivers System.
Open Capital Account.
2. Main Canals and Branches.
4. Falls and Weirs.
Constructing a surplus weir for the Lukulam Channel at Thutukulam above the Andhavaram Regulator.

	RS.
Estimate—	
I. Works	1,280
II. Establishment	294
III. Tools and Plant	6
Total ...	1,580

2. This sanction is registered as No. 128 I. of 1901–1902, and will expire on the 31st March 1903.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
„ Superintending Engineer, I Circle.
„ Examiner, Public Works Accounts.
„ Revenue Department.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. *Spare copies*

G.O., No. 40 I., 10th January 1902.

JANUARY.

Experiments on Wells

The estimate of Rs. 1,000 for — in the Church of Scotland settlement, 5 miles from Chingleput, sanctioned with remark.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers:—

From A. CHATTERTON, Esq., B.SC., Officer in charge of the Aluminium Department, School of Arts, to the Chief Engineer for Irrigation, dated Madras, 20th November 1901, No. Al/3826.

With reference to our recent visit to the Church of Scotland Mission Pariah settlement at Melrosupuram in the Chingleput district, I have the honour to submit, for your consideration, the following proposals for experiments on the wells which have been sunk there by the Reverend A. Andrew.

It was, I think, generally agreed that the settlement offered favourable conditions for experiments on the output of wells and the possibilities of improving their capabilities to supply water for irrigation. On the land belonging to the settlement there are several wells and at one of them is an aërmotor with a wheel 10 feet in diameter. The lift at this well is 20 feet and the aërmotor is much too small to do more than utilize a fraction of its available supply. At another well there was a water lift designed by Mr. Andrew to work with bullock power and of sufficient capacity to lift all the water apparently available in the dry weather. The other wells are at present unprovided with means for drawing water from them, but Mr. Andrew is now constructing a lift for one and it will probably be brought into use as soon as the monsoon is over, and the fields require to be artificially watered.

I have sent down an Engineer student to Melrosupuram to take levels and make experiments on the aërmotor, and if funds can be provided I would suggest that the following experiments should be carried out:—

(1) On the well at the lower level which is provided with a water lift, I think it would be desirable to hire a few bullocks and pump water from it continuously day and night. This would lower the water in the well till either it was emptied or till the inflow equalled the amount of water withdrawn. It would not be difficult to ascertain approximately the quantity of water lifted and the effect of the pumping on the level of the water in the adjacent wells. Of course it would be necessary to provide a channel to carry the water away to a distance so that it may not find its way back into the well or into those in the neighbourhood. The cost of this experiment which might be carried on for about a month would be as follows:—

	RS.
Earthen channel	50
Four pairs of bullocks	60
Two drivers	12
Batta and expenses of Engineer student to supervise the experiment ...	30
Total...	152

Thus, for an expenditure of Rs. 150, we should ascertain the possibilities of carrying out a more extensive experiment with steam power later on. The lift would probably raise from 3 to 4 thousand gallons per hour or roughly one-sixth of a cubic foot per second. If it was found that this quantity of water could be easily supplied by the well and that it produced but little effect on the other wells, it would, I think, then be desirable to set up a portable engine and pump and try the effect of a very much more rapid unwatering of the well. With a 6-inch centrifugal pump and a small portable engine, it would be easy to raise 1 cubic foot per second as on a lift of 20 feet with an efficiency of 60 per cent., the power required would be slightly under 4 horse-power. The engine and pump could be supplied from the Public Works Workshops and the expense of pumping for a month would roughly be—

	RS.
Delivery of engine and pump at site	25
Erection of pump	50
Fuel for a month, 10 tons of coal at, say, Rs. 20 per ton	200
Wages of drivers, etc.	60
Return of engine and pump and unforeseen expenses	100
Making good damage to well	15
Total ...	450

The total cost of the two experiments would be Rs. 600 and for this preliminary expenditure we should be able to ascertain whether it would be desirable to carry the experiment further and attempt to irrigate the whole settlement by steam pumping. At the time of our visit to Melrosupuram it was thought that it would be better to experiment on the upper well, and undoubtedly the permanent pumping should be done there; but for the preliminary experiments the lower well with a smaller lift, I think, offers greater advantages.

I estimate that the expenditure will not be more than Rs. 600, but I would suggest that a grant for Rs. 1,000 be made and should the results show the desirability of establishing a permanent pumping station, I think a further grant of Rs. 2,000 would enable the pumping to be carried on for a whole season and would enable us to ascertain what would be the effect of deepening the well.

I am unable to do more than roughly sketch the nature of the experiment or submit anything better than very rough estimates of its cost.

No. 271 I.

Note by the Chief Engineer for Irrigation.

Mr. Chatterton asks for a grant of Rs. 1,000 to conduct certain experiments on wells, as detailed in his letter read above, in the Church of Scotland Pariah settlement, 5 miles from Chingleput. It is considered that, if the proposed experiments are carried out, some valuable information on the yield of wells in this part of the district will be made available, in which case it will be possible to judge how far the extension of irrigation under wells would be justified not only at the settlement but in a considerable area around where the sub-soil is known to be very similar. The accompanying estimate of Rs. 1,000 for the experiments is recommended for sanction.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

7th December 1901.

ORDER—No. 40 I., dated 10th January 1902.

The following estimate is sanctioned :—

Provincial.
Irrigation.
43. Minor Works and Navigation.
Class V—Agricultural Works.
Original Works.
Chingleput Division.

Experiments on wells in the Church of Scotland Settlement, 5 miles from Chingleput.

	RS.
Estimate	1,000

2. This sanction is registered as No. 130 I. of 1901–1902.

3. The funds required for the work will be provided as soon as they become available by surrenders and will be placed at the disposal of Mr. Chatterton.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
,, the Superintending Engineer, V Circle.
,, the Revenue Department.
,, A. Chatterton, Esq.
,, the Examiner, Public Works Accounts.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. *Spare copies*

G.O., No. 41 I., 10th January 1902.

JANUARY.

Mellavagu Dam, Kistna Northern Division

The revised estimate of Rs. 7,920 for the investigation of the site of the proposed —, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers :—

From the Superintending Engineer, II Circle, dated 28th November 1901, No. 325 I.

No. 274 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, II Circle, submits a revised estimate for the investigation of the site of the proposed Mellavagu dam, Kistna Northern division, involving an excess of Rs. 2,470 over the estimate of Rs. 5,450 sanctioned in G.O., No. 79 I., dated 24th January 1900. The excess is chiefly due to the increased rates for earthwork rendered necessary owing to the nature of the different soils met with during the excavation of the trench and to the extra quantity of blasting work carried out. The revised estimate may be sanctioned.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

20th December 1901.

Order—No. 41 I., dated 10th January 1902.

The following revised estimate is sanctioned in supersession of the estimate of Rs. 5,450 sanctioned in G.O., No. 79 I., dated 24th January 1900 :—

Provincial.
Irrigation.
43. Minor Works and Navigation.
Class IV—Other Minor Works for which neither Capital nor Revenue nor Individual Accounts are kept.
(*a*) In charge of the Public Works Department.
Original Works.
Kistna Northern Division.
Investigation of the site of the proposed Mellavagu dam.

	RS.
Estimate	7,920

2. This sanction is registered as No. 129 I. of 1901-1902.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
„ Superintending Engineer, II Circle, with plans and estimates.
„ Examiner, Public Works Accounts.

IRRIGATION.

Government {1902} of Madras.

PUBLIC WORKS.

Recd.	} 1902.	*Enclosures*
Regd.		*Spare copies*

G.O., No. 42 I., 10th January 1902.

JANUARY.

Closure of Canals in the Kistna Delta

Notification intimating the dates for the — during 1902 for the purpose of silt clearances, ordered to be published in the Fort St. George and the Gódávari and Kistna District Gazettes.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

READ—the following papers :—

From Colonel C. C. RAWSON, R.E., Superintending Engineer, II Circle, to the Chief Engineer for Irrigation, dated Bezwada, 24th December 1901, No. 375 I.

I have the honour to report that I propose, with the concurrence of the Collector of the district, to close the canals in the Kistna from the 14th February 1902 at 6 P.M. to the 1st June 1902, 6 P.M.

2. I am obliged to have such a long closure because of the construction of the new head sluice at Bezwada and of the new lock at 11th mile of Bank canal, Western delta.

3. Please issue usual notification in the *Fort St. George Gazette.*

No. 5 I.

Note by the Chief Engineer for Irrigation.

In the above letter, the Superintending Engineer, II Circle, intimates the dates he proposes for the usual closure of canals in the Kistna delta during 1902 for the purpose of silt clearances, and states that the Collector has given his concurrence to the dates.

4th January 1902.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

ORDER—No. 42 I., dated 10th January 1902.

Ordered that the following notification be published in the *Fort St. George Gazette* and the Gódávari and Kistna District Gazettes until 1st June 1902 :—.

NOTIFICATION.

CLOSURE OF CANALS IN 1902.

Kistna Delta System.

Canals.	Date of Closing.	Date of Re-opening.
Eastern Section.		
Main canal	14th February 1902	1st June 1902.
Masulipatam canal		
Ellore canal		
Ryve "		
All other canals		
Western Section.		
Main canal	14th February 1902	1st June 1902.
Bank canal		
Nizampatam canal		
Commamur canal		

NOTE.—Canals do not become thoroughly navigable for about 48 hours after re-opening.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, I Circle.
" " " II "
" Superintendent, Government Press, with notification.
" Revenue Department.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. *Spare copies*

G.O., No. 58 I., 15th January 1902.

JANUARY.

Nagarikatakam Channel, Ganjam Minor Rivers System

The estimate of Rs. 1,840 for protecting the nose at the head of the —, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers:—

From the Superintending Engineer, I Circle, dated 17th December 1901, No. 1616 G.N.

Enclosure.

Report to accompany the Estimate for protecting the nose at the head of Nagarikatakam Channel.

	RS.
Amount of Estimate	1,490

The present earthen nose of the Nagarikatakam channel at its head in the Vamsadhara river is being gradually scoured away by the current. It is therefore proposed to protect it by a revetment built upon a masonry toe wall, as per the plan submitted herewith, and the present estimate is accordingly submitted for sanction.

The work will be executed as per the standard specifications and completed by December 1903.

(Signed) S. A. SWAMINATHA AIYAR,
Sub-divisional Officer.

(Signed) L. H. GREG,
Offg. Executive Engineer.

7th December 1901.

No. 14 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, I Circle, submits an estimate, amounting to Rs. 1,490, for protecting the nose at the head of the Nagarikatakam channel, Ganjám minor rivers system. It is stated that the present earthen nose of the channel is being gradually scoured away by the current, and it is therefore proposed to protect it by revetment. The estimate may be sanctioned.

2. The work will probably be completed by the 31st March 1903.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

9th January 1902.

ORDER—No. 58 I., dated 15th January 1902.

The following estimate is sanctioned:—

Provincial.
Irrigation.
43. Minor Works and Navigation.
Class II—Minor Works for which Capital and Revenue Accounts are kept.
Ganjám Minor Rivers System.
Open Capital Account.
I. Works.
2. Main Canal and Branches.
P. Miscellaneous.
Protecting the nose at the head of Nagarikatakam Channel.

	RS.
Estimate—	
I. Works	1,490
II. Establishment	343
III. Tools and Plant	7
	1,840

2. This sanction is registered as No. 132 I. of 1901–1902, and will expire on the 31st March 1903.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
„ Superintending Engineer, I Circle, with plan and estimate.
„ Examiner, Public Works Accounts.

IRRIGATION
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd.	1902.	*Enclosures*
Regd.		*Spare copies*

G.O., Nos. 59, 60 I., 15th January 1902.

JANUARY.

Pillai Voikal No. 3, Cauvery Delta System

Forwarding copy of Proceedings sanctioning, with remark, the estimate, amounting to Rs. 13,300, for improvements to —.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers :—

From the Superintending Engineer, V Circle, dated 13th June 1896, No. 43 E.I./C.
To the „ V „ „ 29th Dec. „ „ 109 T.J.
Petition from the Ryots of Venkatasamudrum, etc., villages, Tanjore district [without date].
To the Superintending Engineer on Special Duty, dated 3rd April 1897, No. 37 T.J.
Petition from the Ryots of Venkatasamudrum, etc., villages, Tanjore taluk, 16th Aug. 1897.
To the Superintending Engineer on Special Duty, dated 26th Aug. 1897, No. 98 T.J.
From the „ „ „ 31st „ „ „ 666.
To the „ V Circle, dated 9th Sept. 1897, No. 105 T.J.
Petition from the Ryots of Varagur and Amayagaram villages, Tanjore taluk, 18th Aug. 1898.
To the Superintending Engineer, V Circle, dated 26th Aug. 1898, No. 91 T.J.
Petition from the Ryots of Varagur and Amayagaram, dated 14th Oct. 1898.
To the Superintending Engineer, V Circle, dated 22nd Oct. 1898, No. 105 T.J.
Petition from the Ryots of Varagur and Amayagaram villages, Tanjore taluk, 18th Dec. 1898.
To the Superintending Engineer, V Circle, dated 4th Jan. 1899, No. 2 T.J.
Petition from the Ryots of Varagur, dated 7th Oct. 1899.
To the Superintending Engineer, V Circle, dated 7th Nov. 1899, No. 103 T.J.
Petition from the Ryots of Venkatasamudrum Varagur villages, Tanjore dt., 17th Aug. 1900.
To the Superintending Engineer, V Circle, dated 28th Aug. 1900, No. 79 T.J.
From the „ V „ „ 24th Sept. „ „ 357 E.I.
To the „ V „ „ 21st Nov. „ „ 102 T.J.
From the „ V „ „ 31st July 1901, „ 261 E.I.
„ „ V „ „ 29th Oct. „ „ 362 E.I.

Enclosures.

Report to accompany the Estimate for special repairs to Pillai Voikal No. 3.

			RS.
Amount of Estimate ...	Earthwork	... ...	4,000
	Masonry work	... ...	7,450
			11,450

There are three channels of this name: Pillai Voikal No. 1 takes off from Cauvery near Vennar old head. This estimate does not deal with this.

2. Pillai Voikal No. 2 takes off from the left bank of Vennar and has its head about 3 furlongs below the Vennar new head. Two other channels (Mahadevapuram and Thiruppayur) both taking off from Vennar left bank above Katchamangalam anicut, fall into Pillai Voikal No. 2, which surpluses into Pillai Voikal No. 3 in times of flood. As the Mahadevapuram head sluice is not regulated, it is proposed to fit it with a shutter, worked by screw-gearing. The Thiruppayur head sluice it is proposed to close, and the irrigation under it will be brought under the proposed supplemental head sluice to Pillai Voikal No. 3.

3. As the head sluice of the Pillai Voikal No. 3 cannot give a full supply when the water is at crest level, it is proposed to shift the head of Nemam and Agarapettai channels to Pillai Voikal No. 2 as shown in the survey and to construct a supplemental head sluice above the present head sluice. These two head sluices will discharge the quantity required. The Nemam and Agarapettai channels will have a better supply by the proposed change.

4. The existing defects in Pillai Voikal No. 3 are: The banks are very weak in places and breach frequently; these places it is proposed to strengthen and as stated above it is proposed to regulate the amount of water entering from Pillai Voikal No. 2 through the Mahadevapuram sluice during floods. In consequence of these frequent breaches, the lands which lie betweeen the first 2 miles of the channel and Kunakadungal drain are often submerged, while the lands at the tail end of the channel suffer from an insufficient supply.

5. The present sluices do not admit of the earth banks making a good connection; the sluices as now designed will admit of this. The vents have been designed to give an ample supply for the acreage under each. There are some sluices irrigating very small areas that have been opened by the ryots for their own use. As most of these are unnecessary, they have been abolished and the lands under them supplied from other sluices. A list of existing sluices with the necessary details and the alterations proposed is submitted.

6. It is stated that about 700 acres of punjah land at the tail end of the channel will be converted into nanjah, if the necessary water is made available. It is hoped that the proposed alterations will enable sufficient water to be passed down to the tail end.

7. The head portion of the channel irrigates lands belonging to Kallars and the tail portion land belonging to Brahmins. It is stated that these Kallars sometimes purposely breach the channel, and I think that an establishment to patrol the channel and to see that no mischief is done is desirable; and I believe the owners of lands at the tail end would pay for such an establishment which may be placed under the orders of the Revenue Department.

(Signed) H. H. O'CONNELL,
Ex. Engineer, Tanjore Divn.

Estimate Form—Abstract—Classified.

Sub-head.	Names of works.	Amount of estimate for individual works.	Total of sub-heads.	Total for each canal or distributary.	Total of each main head.
1	2	3	4	5	6
		RS.	RS.	RS.	RS.
	CAPITAL EXPENDITURE NOT CHARGED TO REVENUE.				
	49. Irrigation.				
	Cauvery Delta System.				
	Vennar Section.				
	Open Capital Account.				
	I. Works.				
	3. Distributaries.				
	Unremunerative Works.				
	Remodelling Pillai Voikal.				
B. Land ..	Land compensation	240	240		
C. Works ..	Fitting the Mahadevapuram head sluice with screw-gearing shutters	140			
	Improving head sluice of Pillai Voikal No. 3 ..	470			
	Remodelling Kachamangalam sluice No. 1	135			
	,, Orathur sluice No. 2	310			
	,, (1) Kachamangalam sluices Nos. 2 and 3, (2) Ragagiri sluice No. 10, (3) Unjini sluice No. 11, (4) Kuthiraimadi, and (5) Pee Voikal	710			
	Remodelling Kuvalaigudy sluice No. 22, Sithathur Kuttai sluice No. 21 and Subramaniam Kanni sluice No. 24	290			
	Remodelling Raman Kanni sluice No. 25	105			
	Constructing Koodaranel sluice No. 26	195			
	,, a division dam for Naniam and Agarapet channels	55			
	Improving division dam No. 2	185			
	Constructing division dams Nos. 3, 5 and 8	390			
	,, a supplemental head sluice to Pillai Voikal No. 3	1,600			

Estimate Form—Abstract—Classified—cont.

Sub-head.	Names of works.	Amount of estimate for individual works.	Total of sub-heads.	Total for each canal or distributary.	Total of each main head.
1	2	3	4	5	6
		RS.	RS.	RS.	RS.
	Remodelling Pillai Voikal—*cont.*				
C. Works—*cont.*	Remodelling Agarapet sluice No. 4	130			
	Constructing Kulagudi sluice No. 5 and Sankarambady sluice No. 7	340			
	Remodelling Runganathapuram sluice No. 6 and Odayar sluice No. 9	290			
	Remodelling Kallugudi sluice No. 8	125			
	,, Rettanadi sluice No. 27	150			
	,, Neelakandapuram sluice No. 14 ..	140			
	,, Nadu Voikal sluice No. 16	130			
	,, Palarmaneri sluice No. 18 and Thenvoyal sluice No. 13	275			
	,, Jevanthinathapuram sluice No. 19 ..	125			
	Constructing Odungur-Velangudy sluice No. 20 and Vennamangalam sluice No. 15	480			
	Minor repairs to other masonry works	60			
			6,830		
L. Earthwork ..	Silt clearance	330			
	Forming left bank	1,700			
	,, right bank	1,210			
	Widening Thiruppiyur channel	100			
	New course of Thiruppiyur channel	70			
	Channel in front and rear of supplemental head sluice to Pillai Voikal No. 3	200			
	Sundry earthwork	130			
			3,740		
	Total, I. Works	..	..	10,810	
	II. Establishment ..	..	..	2,431	
	III. Tools and Plant ..	..	..	59	
	Grand Total ..	..	..	..	13,300

No. 263 I.

Note by the Chief Engineer for Irrigation.

Pillai voikal No. 3 takes off from the left bank of the Vennar above the Kachamangalam anicut with a regulator at its head. Several petitions having been received from the ryots of the Varagur, Amayagaram, etc., villages, Tanjore taluk, on the subject of the inadequate supply of water to their lands at the tail end of the above channel, the Superintending Engineer, V Circle, was requested to take early steps for remedying the evils complained of. With his letter No. 357 E.I., dated 24th September 1900, he submitted an estimate, amounting to Rs. 9,510, for remodelling the channel, in which provision was made—

(1) for giving a supplemental supply of 30 cubic feet per second to Pillai voikal No. 3 through Pillai voikal No. 2 which surpluses into the former, the present head sluice above the Kachamangalam anicut being inadequate to discharge the full supply required when the water is at the crest of the anicut; and

(2) for closing breaches, clearing and widening the bed, raising banks and remodelling the heads of sluices of Pillai voikal No. 3 to send down a sufficient supply for the lands at its tail end.

The first proposal not having been approved by the Chief Engineer for Irrigation, the estimate was returned to the Superintending Engineer with a suggestion that a supplemental sluice or a new head sluice in a better position in lieu of the existing one, which is too small for discharging the required quantity when water is at crest level of the anicut, may be provided.

The Superintending Engineer now submits a revised estimate, amounting to Rs. 11,450, which has been reduced in this office to Rs. 10,810 owing to mistakes found in the calculations. It is recommended that the estimate as altered may be sanctioned.

It is stated that the proposed improvements will not only ensure a better distribution of water to the lands lower down the channel, but that 700 acres of dry lands will be converted into wet.

The proposals were published in the District Gazette for three months and all objections considered. They have received the Collector's approval.

The work is classed as "remunerative" and will probably be completed by the 31st March 1903.

23rd December 1901.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

ORDER—No. 59 I., dated 15th January 1902.

The estimate, amounting to Rs. 10,810, or Rs. 13,300 including establishment and tools and plant, for improvements to Pillai voikal No. 3, Cauvery delta system, is sanctioned.

2. This sanction is registered as No. 133 I. of 1901–1902, and will expire on the 31st March 1903.

3. The approximate original cost, viz., Rs. 1,800, of the old sluices to be replaced will be written back by the Examiner of Public Works Accounts from the Capital to the Revenue account of the Cauvery delta system in accordance with paragraph 2157, Public Works Department Code.

4. Ordered that a copy of these Proceedings be forwarded to the Government of India for information.

[Here enter No. 60 I., dated 15th January 1902.]

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
,, Superintending Engineer, V Circle, with plans and estimates.
,, Examiner, Public Works Accounts.

ENDORSEMENT—No. 60 I., dated 15th January 1902.

Forwarded.

(By order.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. *Spare copies*

G.O., Nos. 64, 65 I., 16th January 1902.

JANUARY.

Lock Channel to the Kistna River

Forwarding a copy of the Proceedings sanctioning the estimate of Rs. 2,320 for excavating a new — in front of the Bezwada lock.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following paper :—

From the Superintending Engineer, II Circle, dated 6th December 1901, No. 336 I.

ENCLOSURE.

REPORT to accompany the Estimate for excavating a new lock channel to the river in front of Bezwada Lock.

[*Reference.*—Verbal orders of the Superintending Engineer on 22nd October 1901.]

	RS.
Amount of Estimate	1,880

During the floods in the river, the current at the entrance of lock channel involves great danger to the incoming and outgoing boats, and, in order to avert such danger, it is proposed to excavate an auxiliary channel from the river to join the existing one at 150 feet from the lock.

The estimate, therefore, provides for excavation of the channel proposed with bed width of 22 feet and bed level of + 44·00, which is 3 feet above the bed level of the existing channel and also for recutting the sides as shown in the plan and the sections accompanying.

(Signed) A. G. ROMILLY,
Ex. Engr., Kistna Northern Divn.

No. 259 I.

Note by the Chief Engineer for Irrigation.

During floods in the Kistna river, the current at the entrance of the Bezwada lock channel is reported to be a source of great danger to the boats, for the safety of which it was suggested to the Superintending Engineer that a new channel to the river should be excavated in front of the Bezwada lock. He now submits an estimate of Rs. 1,880 for the work which may be sanctioned.

2. The work is classed as "unremunerative," as it is not directly remunerative in itself; but being required for the full development of the Kistna delta system, may be charged to the Open Capital account thereof. It will probably be completed by the 31st March 1902.

16th December 1901. (Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

ORDER—No. 64 I., dated 16th January 1902.

The following estimate is sanctioned :—

Imperial.
49. Irrigation.
Capital Expenditure not charged to Revenue.
Kistna Delta System.
Open Capital Account.
Eastern Section.
I. Works.
2. Main Canal and Branches.
I. Navigation Works.

Excavating a new lock channel to the river in front of the Bezwada Lock.

Estimate—

	RS.
I. Works	1,880
II. Establishment	432
III. Tools and plant	8
Total ...	2,320

2. This sanction is registered as No. 155 I. of 1901–1902, and will expire on the 31st March 1902.

3. Ordered that a copy of these Proceedings be forwarded to the Government of India for information.

[Here enter No. 65 I., dated 16th January 1902.]

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
,, Superintending Engineer, II Circle,
with plans and estimates.
,, Examiner, Public Works Accounts.

ENDORSEMENT—No. 65 I., dated 16th January 1902.

Forwarded.

(By order.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. } *Spare copies*

G.O., Nos. 70, 71 I., 18th January 1902.

JANUARY.

6th Distributary of the 12th Branch Channel, Periyar Project

Forwarding a copy of the Proceedings sanctioning, with remark, the estimate of Rs. 2,900 for enlarging the sluices in the — and for excavating the necessary field channels.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers :—

From the Superintending Engineer, VI Circle, dated 22nd Nov. 1901, No. 1293 M.D.

Enclosure.

Report to accompany the Estimate for enlarging sluices in the 6th Main Distributary, 12th Branch Channel.

	RS.
Amount of Estimate	2,500

The estimate is submitted to provide for the adequate irrigation of an additional 1,373 acres. The estimate provides for (1) enlarging the size of some of the sluices in the distributary, as their present sizes are utterly inadequate for the ayacut they are now found to command; (2) for excavating the necessary field channels; (3) for acquiring the land required for these channels; and (4) for constructing a culvert across Tiruppuvanam road to the field channel from No. 9 sluice to irrigate the lands lying on the other side of the road. No provision is made for culverts under mere cart-tracks.

A comparative statement of present and proposed arrangement of sluices is also attached.

A statement showing the original cost of the sluices superseded is attached as an appendix.

The work will be carried out in accordance to the current departmental standard specifications.

(Signed) H. T. KEELING,
Ex. Engr., Madura Divn.

No. 273 I.

Note by the Chief Engineer for Irrigation.

In G.O., No. 898 I., dated 9th October 1897, sanctioning an estimate for excavating the 6th distributary of the 12th branch channel, Periyár project and its subsidiary channels, a provision of Rs. 20,010 was made for excavating the 6th main distributary and its subsidiary channels A and B for the irrigation of 2,350 acres. The Superintending Engineer, VI Circle, now reports that an area of 3,733 acres is commanded by the above distributary and its subsidiary channels and submits an estimate of Rs. 2,500 for enlarging the sluices in the distributary and for excavating the necessary field channels to irrigate the additional area of 1,373 acres. The estimate may be sanctioned.

2. The work is classed as remunerative and will probably be completed by the 31st March 1902.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

20th December 1901.

ORDER—No. 70 I., dated 18th January 1902.

The following estimate is sanctioned :—

Imperial.
Irrigation.
49. Capital expenditure not charged to Revenue.
Periyár Project.
Open Capital Account.
Remunerative Work.
I. Works.
3. Distributaries.

Enlarging the sluices in the 6th Distributary of the 12th Branch Channel and excavating the necessary field channels.

		RS.	RS.
B. Land—			
Compensation	...		784
C. Works—			
Constructing eight masonry sluices	...	960	
,, two 12″ cement pipe sluices	...	200	
,, road culvert	...	136	
			1,296
L. Earthwork	...		396
O. Miscellaneous	...		24
Total, I. Works	...		2,500
II. Establishment	...		394
III. Tools and Plant	...		6
Total	...		2,900

2. This sanction is registered as No. 142 I. of 1901–1902, and will expire on the 31st March 1902.

3. The approximate original cost of the sluices to be replaced, viz , Rs. 669, will be written back by the Examiner of Public Works Accounts from the Capital to the Revenue Account of the project in accordance with paragraph 2157 of the Public Works Department Code.

4. Ordered that a copy of these Proceedings be forwarded to the Government of India for information.

[Here enter No. 71 I., dated 18th January 1902.]

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
„ Superintending Engineer, VI Circle,
with plans and estimates.
„ Examiner, Public Works Accounts.

ENDORSEMENT—No. 71 I., dated 18th January 1902.

Forwarded.

(By order.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. *Spare copies*

G.O., Nos. 72, 73 I., 18th January 1902.

JANUARY.

Daggumalli Main Channel

Forwarding a copy of the Proceedings sanctioning the estimate of Rs. 4,800 for extending the — from 0 mile 5 furlongs to 2 miles 4 furlongs 146 feet, Masulipatam canal, Kistna Eastern delta.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers :—

From the Superintending Engineer, II Circle, dated 4th December 1901, No. 337 I.

ENCLOSURE.

REPORT to accompany Estimate for extending Daggumalli main channel from 0 mile 5 furlongs to 2 miles 4 furlongs 146 feet.

	RS.
Amount of Estimate	4,200

The present Daggumalli main channel is only 5 furlongs long and is terminated by a tail escape. There is a loss of head in rear of this tail escape of about 2 feet, at which reduced level the water flows by means of a very winding and irregular bothi to the Raparla and Daggumalli lands on the left. No matter how much water is allowed to run into this bothi, the ryots always complain of insufficient supply and there is difficulty in irrigation. There is another inefficient bothi which takes off above the tail escape and turns to the right, irrigating the fields of Raparla, Polavaram and Vundrapudi. This bothi not being under our control is very badly managed, and whenever there is shortness of water is cross bunded by the ryots at will to the detriment of those lower down. It is proposed to extend this Daggumalli main channel to Nimmakur village boundary. By means of this extension the irrigation in the Raparla, Daggumalli, Polavaram, Vundrapudi and Nimmakur will be largely benefited and water, which is now being wasted in low level channels, will become useful for extension of irrigation. The present tail escape will be demolished, a drop will be built at 0 mile 7½ furlongs and a tail escape will be constructed at 2 miles 4 furlongs 146 feet. The extension will cross Raparla tank which is at present supplied from a bothi, the water level in the tank and channel being at the same level. There is no other suitable line that the channel could take, and as the extension only crosses the shallow end of the tank, a very small area of the latter is cut off. The project is very necessary and should, if possible, be carried out before the next irrigation season.

(Signed) P. HAWKINS,
12th September 1901. Ex. Engr., Kistna Eastern Divn.

No. 4 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, II Circle, submits an estimate of Rs. 4,200 for extending the Daggumalli main channel from 0 mile 5 furlongs to 2 miles 4 furlongs 146 feet, Masulipatam canal, Kistna Eastern delta. The lands commanded by the channel do not at present receive an adequate supply, and it is therefore proposed to extend the channel, demolish the existing tail escape in it and construct a drop at 0 mile 7½ furlongs and a tail escape at 2 miles 4 furlongs 146 feet. The estimate, which has been reduced in this office to Rs. 4,170 by omitting cutstones allowed for the top of the wings of the proposed drops, may be sanctioned.

2. The work is classed as "unremunerative" as it is not directly remunerative in itself, but being required for the full development of the Kistna delta system may be charged to the Open Capital account thereof. It will probably be completed by the 31st March 1903.

(Signed) A. W. SMART, Col., R.E.,
3rd January 1902. Ag. Chief Engineer for Irrigation.

ORDER—No. 72 I., dated 18th January 1902.

The estimate, amounting to Rs. 4,170, or Rs. 4,800 including the establishment and tools and plant charges, for extending the Daggumalli main channel from 0 mile 5 furlongs to 2 miles 4 furlongs 146 feet, Masulipatam canal, Kistna Eastern delta, is sanctioned.

2. This sanction is registered as No. 140 I. of 1901–1902, and will expire on the 31st March 1903.

3. Ordered that a copy of these Proceedings be forwarded to the Government of India for information.

[Here enter No. 73 I., dated 18th January 1902.]

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, II Circle, with plans and estimates.
" Examiner, Public Works Accounts.

ENDORSEMENT—No. 73 I., dated 18th January 1902.

Forwarded.

(By order.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd.	1902.	*Enclosures*
Regd.		*Spare copies*

G.O., Nos. 74, 75 I., 18th January 1902.

JANUARY.

Tanks between the 4th and 6th Distributaries of the 12th Branch Channel, Periyar Project

Forwarding a copy of the Proceedings sanctioning the estimate, amounting to Rs. 2,390, including the establishment and tools and plant charges, for abandoning certain — .

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers :—

From the Superintending Engineer, VI Circle, dated 22nd November 1901, No. 1291 M.D.

Enclosures.

Report to accompany the Estimate for abandoning tanks between 4th and 6th Distributaries, 12th Branch Channel.

RS.
Amount of Estimate 2,125

The estimate provides for abandoning tanks between the 4th and 6th distributaries, 12th branch channel some by breaching the bunds at suitable sites, and some by excavating drainage channels as shown in the annexed map.

2. The drains are designed to carry a run-off of 6 inches of rain falling on the catchment in 24 hours.

3. The necessary provision is also made in the estimate for land compensation, demarcation stones, etc. The tank Malukisi Endal numbered 24 in the sketch will be left as it is for communal purposes.

4. I propose to retain Sirumanam tank numbered in the sketch-map, though it is not one of those to be maintained as per G.O., No 176 I., dated 20th February 1897, the reasons for this are storage necessity owing to its situation, size, etc., and communal purposes.

5. The work will be carried out in accordance with the current departmental standard specifications.

Estimate Form—Abstract.

Quantity.	Description of work.	Amount.	Total.
1	2	3	4
	IMPERIAL.	RS.	RS.
	IRRIGATION.		
	49. *Capital Expenditure not charged to Revenue.*		
	Periyár Project.		
	Open Capital Account.		
	I. Works.		
	4. Drainage and Protective Works.		
	Abandoning tanks between 4th and 6th Distributaries, B/12.		
	Unremunerative Works.		
	B. Land Compensation—		
1·65	Dry lands	83	
4·61	Wet do.	922	
			1,005
	L. Earthwork—		
80	Earthwork cutting drainage channel A/B	240	
155	Do. do. C/D/E	465	
33	Excavating drainage channel G/H	83	
27	Breaching the tank bunds	135	
..	Contingencies	32	
..	Petty supervision	30	
			985
	O. Miscellaneous—		
270	Demarcation stones, planting, etc., for tank beds	68	
80	Do. do. for drainage channels	60	
..	Contingencies	4	
..	Petty supervision	3	
			135
	Total, I. Works		2,125
	II. Establishment		257
	III. Tools and Plant		8
	Grand Total		2,390

27th June 1901.

(Signed) H. T. KEELING,
Ex. Engr., Madura Divn.

No. 258 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, VI Circle, submits an estimate of Rs. 2,125 for abandoning the tanks between the 4th and 6th distributaries of the 12th branch channel, Periyár project, by breaching the bunds of some at suitable sites and by excavating drainage channels from the others. Their total number is 31, but it is proposed to retain Sirumanam kanmoy and Malukisi Endal and also two other tanks, viz., No. 2, Napidiki, and No. 24, Kuttikaran Endal, whose retention has been recommended by the Collector.

2. The work is classed as "unremunerative" as the probable sale-proceeds, viz., Rs. 2,024, of the irrigable area in the beds of the tanks do not exceed the cost of draining the tanks (*vide* paragraph 2 of the letter from the Government of India printed with G.O., No. 338 I., dated 13th April 1899). It will probably be completed by the 31st March 1902.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

16th December 1901.

ORDER—No. 74 I., dated 18th January 1902.

The estimate, amounting to Rs. 2,125, or Rs. 2,390 including establishment and tools and plant charges, for abandoning certain tanks between the 4th and 6th distributaries of the 12th branch channel, Periyár project, is sanctioned.

2. This sanction is registered as No. 141 I. of 1901–1902, and will expire on the 31st March 1902.

3. Ordered that a copy of these Proceedings be forwarded to the Government of India for information.

[Here enter No. 75 I., dated 18th January 1902.]

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
,, Superintending Engineer, VI Circle, with plans and estimate.
,, Examiner, Public Works Accounts.

ENDORSEMENT—No. 75 I., dated 18th January 1902.

Forwarded.

(By order.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. *Spare copies*

G.O., Nos. 76, 77 I., 18th January 1902.

JANUARY.

Alladapally Channel, Kurnool-Cuddapah Canal

Forwarding a copy of the Proceedings sanctioning, with remarks, the estimate, amounting to Rs. 10,600 including the establishment and tools and plant charges, for improving the —.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers :—

From the Superintending Engineer,	III Circle,	dated	29th May	1901,	No.	1641 I.
To the	,,	III	,,	4th June	,,	,,	3 K.C.
From the	,,	III	,,	3rd Dec.	,,	,,	4027 I.

Enclosures.

Report to accompany the estimate for improvements to Alladapally branch channel in 6th section.

	RS.
Amount of Estimate	10,600

The existing branch channel takes off from above the 3rd drop of Yetur main channel at 1 mile 77 chains right bank, and irrigates at present 395 acres of Alladapally village. This branch has been for the last few years under investigation with the object of extending its irrigation by about 200 acres, bringing the whole acreage under it to about 600 acres in all without including the forest reserve mentioned below.

2. The Special Deputy Collector has been in correspondence with the Revenue Board about the forest reserve overgrown with tooma and commanded by the channel being handed over for cultivation, as the revenue to be derived from the irrigation would be far more profitable than if the land were left as a reserve, but the Board would not at first agree to the proposal.

3. Subsequently and recently owing to altered orders of Government, the forest reserve of 138 acres lying on the left bank of Koondoo river has been sold by public auction by the Revenue Department for cultivation under the block rules, and Special Deputy Collector has now recommended that it be provided with means of irrigation.

4. It is therefore now proposed to remodel the existing channel and to extend it to the required length to irrigate the total extent of 750 acres made up as follows :—

	ACS.
Existing present cultivation under the channel	395
Proposed extension of Alladapally lands (Government patta and inam).	204
Forest reserve lately sold for cultivation	138
Total ...	737
Or in round figures ...	750

5. The total extension of (204 + 138) = 342 acres would mean an increase in revenue of Rs. (342 × 3) = 1,026 per annum, or an average which represents an interest of 11·80 per cent. on the proposed outlay of Rs. 8,700 excluding establishment and tools and plant.

6. The ryots about these tracts are most willing to extend irrigation and the soil is well adapted for the purpose. So there is no doubt this will be a profitable undertaking.

7. The fall of the existing channel is excessive as it runs with the fall of the country; towards the Koondoo it runs for one mile in length and then branches off into small distributaries. The channel for this one mile will be remodelled with necessary drops for checking the excessive fall and extended onwards to the left border of Koondoo river to command the 342 acres of lands proposed to be brought under irrigation. The extension crosses two large depressions in embankments—one at 1 mile 50 chains and the other at 1 mile 65 chains—and then passes on to level ground and parallel to the Koondoo river. The total length of the channel from its head to the end of the proposed extension is 2 miles 50 chains and it is designed to carry water for 750 acres in all.

8. The fall of the country from 0 to 1 mile 30 chains being very great, the channel here is taken almost entirely in cutting by restricting the fall of the channel to one foot per mile by means of drops wherever necessary. The channel from 1 mile 30 chains to 2 miles 5 chains is taken in embankment as it has to cross two depressions unavoidably. From 2 miles 5 chains to 2 miles 50 chains to the end it passes in cutting through fairly level ground.

9. The level of the known maximum flood of 1889 of Koondoo river at the high ground between the two depressions (*vide* long section) is 28·25, which is 5 feet below the top level of the proposed channel bank, or 1 foot below the proposed bed of channel at the place. The width of the embankment at the M.F.L. is 43 feet, with slopes of $1\frac{1}{2}$ to 1; this section is strong enough to act as a flood bank; hence no separate flood bank is proposed, nor is there a better site for it. The drop of 1 foot at 2 miles 5 chains might be avoided by making the channel in the reach above this drop 1 foot lower, but the proposed arrangement is purposely designed in order that the top of the banks may be well above the M.F.L. of Koondoo and thus avoid the necessity of a separate flood bank which was once proposed.

An extra width is now given in the revised estimate on the riverside. The river will be thus entirely kept out and the possibility of the channel breaching into the riverside obviated.

10. The main Yetur channel, of which the Alladapally channel under consideration is a branch, has a head sluice at 171 miles 12 chains on the canal with 10 vents, each $1\frac{1}{2}' \times 1\frac{1}{4}'$, with sill 1 foot below the bed level of the canal. With 4 feet of water in canal the head sluice is capable of discharging with clear overfall the enormous quantity of 200 cubic feet per second sufficient for 13,000 acres. But the present irrigation under the Yetur channel is 2,553 acres, which, together with the proposed extension of 342 acres, will come up to a total of 2,895 acres in all; this at 50 acres per cubic foot will require a discharge of 58 cubic feet per second. At present the 10 vents of the head sluice are generally kept 5 inches open, which gives a discharge of 68·5 cubic feet per second, as shown below with 4 feet water in canal (sill of sluice being 1 foot lower):—

$$D = 5\,A\sqrt{h}. \qquad h = 5'\ \tfrac{5}{2}'' = 4{\cdot}80 \text{ feet.}$$
$$= 5 \times 10\,(1\tfrac{1}{2}' \times \tfrac{5}{12}')\sqrt{4{\cdot}80}$$

= 68·5 cubic feet per second, which is sufficient for (68·5 × 50) = 3,425 acres; and this discharge is generally carried by the existing Yetur main channel, showing thereby that the existing head sluice and channel are capable of discharging the required quantity of water for the proposed extension also.

11. The following are the important masonry works proposed to be built on the channel:—

		MILES.	CHAINS.
(1)	Drop of 3 feet at	0	40
(2)	Do.	0	60
(3)	Do.	1	5
(4)	Do.	1	15
(5)	Culvert with 3 feet drop	1	25
(6)	Drop of 3 feet at	1	30
(7)	Drop of 1 foot at	2	5

12. For the several branches from this channel 8 pipe sluices with masonry front and rear walls are also provided for in the estimate with lump sum provision for Rs. 50 for each.

13. The alignment of the channel where it crosses the two large depressions has been selected after several trial levels were taken and no undertunnels to pass any drainage are necessary as was once supposed as the channel is taken along a ridge, the depressions sloping away in both directions from the proposed line of channel, as may be seen from the longitudinal sections of the depressions and from the land plan tracing on which are marked the levels and course of the depression.

14. The following are the plans that accompany this estimate :—

		SHEETS.
(a)	Longitudinal and cross-sections of the channel	2
(b)	Longitudinal sections of the depressions	1
(c)	Plan of masonry works	1
( )	Tracing of land plan, old, showing the present and proposed irrigation coloured differently	1
(e)	Tracing of land plan, new, showing distinctly and accurately with width of land to be occupied by the channel at different places ...	1
	Total ...	6

(Signed) N. NADHAMUNI MUDALIYAR,
Sub-Engr. and Sub-divnl. Officer.

20th January 1900.

Estimate Form—Abstract—Classified.

Sub-head.	Names of works.	Amount of estimate for individual works.	Total of sub-heads.	Total for each canal or distributary.	Total of each main head.
1	2	3	4	5	6
	PROVINCIAL.	RS.	RS.		RS.
	IRRIGATION.				
	43. *Minor Works and Navigation.*				
	Class II.—Minor Works for which Capital and Revenue Accounts are kept.				
	Kurnool-Cuddapah Canal.				
	Open Capital Account.				
	Section No. VI.				
	I. Works.				
	III. Distributaries.				
	Remunerative Work.				
	Improvements to the Alladapally Branch Channel.				
B. Land ..	Compensation for land required for the channel ..	300	300		
C. Works ..	Constructing a drop at 40 chains	210			
	Do. do. at 60 do.	210			
	Do. do. at 1·5 do.	210			
	Do. do. at 1 mile 15 chains	200			
	Do. a culvert with drop at 1 mile 25 chains ..	500			
	Do. a drop at 1 mile 30 chains	200			
	Do. do. at 2 miles 5 chains	180			
	Fixing pipe-sluices along the channel	400	2,110		
L. Earthwork ..	Improving the channel and forming banks	5,730	5,730		
O. Miscellaneous.	Demarcation stones for the channel	60			
	Fixing mile and furlong stones	40			
	Unforeseen works	410	510	..	..
	Total, I. Works	..	..	..	8,650
	II. Establishment ..	..	..	..	1,920
	III. Tools and Plant ..	..	..	..	30
	Grand Total ..	..	..	..	10,600

20th November 1901. (Signed) N. RATNASABHAPATI PILLAI,
Ex. Engr., Kurnool Divn.

No. 1 I.

Note by the Chief Engineer for Irrigation.

With the first of the papers read above, the Superintending Engineer, III Circle, submitted an estimate of Rs. 9,200, including establishment and tools and plant charges, for improving and extending the Alladapally channel, a branch of the Yetur main channel, which takes off at 171 miles 12 chains, Kurnool-Cuddapah canal. As the proposed extension of the branch channel across two depressions with a bed level at 6 to 7 feet above ground level was considered unsafe, the estimate was returned to the Superintending Engineer for revision. He now submits a revised estimate, amounting to Rs. 8,650, or Rs. 10,600 including establishment and tools and plant charges, in which provision is made for increasing the top width of the right bank of the channel at the depressions from 3 to 6 feet. The revised estimate may be sanctioned.

2. It is reported that the channel at present irrigates 395 acres and that, if the proposed improvements are carried out, a further extent of 342 acres will be brought under irrigation, yielding an additional revenue of Rs. 1,026 per annum or a return of 9·67 per cent. on the total outlay.

3. The work is classed as "remunerative" and will probably be completed by the 31st March 1902.

2nd January 1902.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

Order—No. 76 I., dated 18th January 1902.

The estimate, amounting to Rs. 8,650, or Rs. 10,600 including the establishment and tools and plant charges for improving the Alladapally channel, Kurnool-Cuddapah canal, is sanctioned.

2. This sanction is registered as No. 139 I. of 1901–1902, and will expire on the 31st March 1902.

3. The attention of the Superintending Engineer, III Circle, will be invited to G.O., No. 950 I., dated 17th December 1901, wherein the restriction placed in G.O., No. 1019 I., dated 1st December 1900, on the execution of new works connected with the Kurnool-Cuddapah canal has been withdrawn.

4. Ordered that a copy of these Proceedings be forwarded to the Government of India for information.

[Here enter No. 77 I., dated 18th January 1902.]

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, III Circle, with plans and estimate.
" Examiner, Public Works Accounts.

Endorsement—No. 77 I., dated 18th January 1902.

Forwarded.

(By order.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. *Spare copies*

G.O., Nos. 78, 79 I., 18th January 1902.

JANUARY.

Mogallamori Channel of the Bendamurlanka Canal,
Godavari Central Delta

Forwarding a copy of the Proceedings sanctioning the estimate of Rs. 2,500 for extending the — and for excavating a branch channel from it.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers :—

From the Superintending Engineer,	I Circle, dated	17th June 1901,	No.	1421 G.D.
To the " "	I " "	22nd " "	"	41 G.D.
From the " "	I " "	6th Dec. "	"	3168 G.C.

Enclosure.

Report to accompany the Estimate for "extending Mogallamori Channel" and "excavating Mogallamori Branch Channel."

	RS.
Amount of Estimate	2,120

Mogallamori channel is a branch of Kowsica channel, and the area under it is acres 1,200.

2. What is known as Mogallamori channel is only 1 mile, 7 furlongs long, and beyond this and in extension of it is Turpulanka channel (also a project channel) owned by the mokhasadars of Turpulanka.

3. At the request of the mokhasadars themselves, the Turpulanka channel is now proposed to be taken up by Government, the mokhasadars on their part agreeing to give up the land occupied by the channel free of compensation. Agreements to this effect have now been taken from them by the Revenue Department.

4. The taking up of this extension is found to be necessary, because the ryots will not keep the channel in order and in their hands there is no proper regulation of water. By taking up the channel an additional area of acres 98·9 will be brought under cultivation which the Revenue Department estimates will bring in an additional revenue of Rs. 490–7–0.

5. In addition to this it is proposed to excavate Mogallamori branch channel with its head at Rs. 1–7–0 of the present Mogallamori channel to irrigate some low land in Devaguptam village. The additional area which will come under cultivation is acres 90·50 which the Revenue Department estimate will bring in an additional revenue of about Rs. 500.

6. The other works necessary are a head sluice to the new branch channel and a masonry dam at 2 miles 7 furlongs.

7. The estimate also includes land compensation for the branch channel which may be considerably reduced as land can probably be given in exchange. Provision is also made for demarcating both channels. The value of the land has been obtained from the Revenue Department.

8. With these remarks the estimate is submitted for sanction under Extensions and Improvements.

(Signed) A. C. LANGSTON,
Ex. Engr., Gódávari Central Divn.

26th November 1901.

No. 8 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, I Circle, submits an estimate of Rs. 2,120 for extending the Mogallamori channel of the Bendamurlanka canal, Gódávari Central delta, and for excavating a branch channel from it. It is stated that the proposed works, if carried out, will bring a further extent of 189 acres under irrigation, from which an additional revenue of Rs. 990 is anticipated. The estimate may be sanctioned.

2. The work is classed as "remunerative" and will probably be completed by the 31st March 1903.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

4th January 1902.

ORDER—No. 78 I., dated 18TH January 1902.

The following estimate is sanctioned :—

Imperial.
Irrigation.
49. Capital expenditure not charged to Revenue.
Gódávari Delta System.
Central Section.
Open Capital Account.
I. Works.
(2) Main Canals and Branches.
Remunerative Work.

Extending the Mogallamori Channel and excavating a branch channel from it.

	RS.	RS.
B. Land—		
Compensation for land	507	
	——	507
C. Works—		
Constructing a sluice at head of Mogallamori branch channel.	360	
Building a dam at 2 miles 7 furlongs of Mogallamori channel.	300	
	— —	660
L. Earthwork—		
Extending and excavating the channel	630	
	——	630
O. Miscellaneous—		
Demarcation stones	323	
	——	323
Total, I. Works ...		2,120
II Establishment ...		371
III. Tools and Plant ...		9
Total, Estimate ...		2,500

2. This sanction is registered as No. 143 I. of 1901–1902, and will expire on the 31st March 1903.

3. Ordered that a copy of these Proceedings be forwarded to the Government of India for information.

[Here enter No. 79 I., dated 18th January 1902.]

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, I Circle, with plans and estimates.
" Examiner, Public Works Accounts.

ENDORSEMENT—No. 79 I , dated 18th January 1902.

Forwarded.

(By order.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. } *Spare copies*

G.O., Nos. 80, 81 I., 18th January 1902.

JANUARY.

Wooden Bridge over the Main Canal, Kistna Eastern Division

Forwarding a copy of the Proceedings sanctioning the estimate of Rs. 4,700 for constructing a temporary —.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers :—

From the Superintending Engineer, II Circle, dated 7th December 1901, No. 342 I.

Enclosures.

Report to accompany the Estimate, amounting to Rs. 3,780, for constructing a temporary wooden bridge for bandy traffic across Eastern Delta Main Canal.

The bridge is required to carry the traffic from the town side of the main canal across the anicut.

As the site of the new head sluice is on that of the existing masonry bridge, it will be necessary to demolish the latter as soon as possible, in order that the foundations for the new work may be begun on the 14th February, the proposed date of closure of canals.

All the materials for the new head sluice must be carried across the canal, and hence it is essential that this temporary bridge should be at once constructed.

The accompanying sketch shows the method of opening the moveable portion of the bridge.

It is intended that this part should be kept open a certain time each day, the exact time to be notified to the public and boat-owners.

(Signed) A. G. ROMILLY,
for Supg. Engineer, II Circle.

No. 7 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, II Circle, submits an estimate of Rs. 3,780 for constructing a temporary wooden bridge, in lieu of the existing masonry one, over the Main Canal, Kistna Eastern division, which has to be demolished as the new Bezwada head sluice is to be built at its site. The temporary bridge is required in the interests of traffic. The estimate may be sanctioned.

2. The work is classed as "unremunerative" as it is not directly remunerative in itself but being required for the full development of the Kistna delta system, may be charged to the Open Capital account thereof. It will probably be completed by the 31st March 1902.

4th January 1902.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

ORDER—No. 80 I., dated 18th January 1902.

The following estimate is sanctioned:—

Imperial.
Irrigation.
49. Capital expenditure not charged to Revenue.
Kistna Delta System.
Eastern Section.
Open Capital Account.
I. Works.
(2) Main Canals and Branches.
G. Bridges.
Unremunerative Work.
Constructing a temporary wooden bridge over Main Canal.

Estimate—	RS.
I. Works	3,780
II. Establishment	869
III. Tools and plant	51
Total ...	4,700

2. This sanction is registered as No. 134 I. of 1901-1902, and will expire on the 31st March 1902.

3. Ordered that a copy of these Proceedings be forwarded to the Government of India for information.

[Here enter No. 81 I., dated 18th January 1902.]

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
,, Superintending Engineer, II Circle, with plans and estimates.
,, Examiner, Public Works Accounts.

ENDORSEMENT—No. 81 I., dated 18th January 1902.

Forwarded.

(By order.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. *Spare copies*

G.O., No. 84 I., 20th January 1902.

JANUARY.

Tatimakula Anicut across the Surplus channel of Pedda Tippa Samudram Tank, Cuddapah Division

The estimate of Rs. 4,700 for reconstructing the —, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers :—

From the Superintending Engineer, III Circle, dated 17th December 1901, No. 4167 I.

ENCLOSURE.

REPORT to acompany Estimate for reconstructing Tatimakula Anicut, Madanapalle Taluk.

	RS.
Amount of estimate	4,700

Pedda Tippa Samudram tank, Imperial No. 44, has an ayacut of 1,729 acres assessed at Rs. 12,236. This ayacut includes the area cultivated directly by the sluice water from the tank as well as that irrigated by channels which take off from the anicuts built across its surplus streams.

The tank is provided with two surplus works—one at either end—the weir at the right flank being the most important. The tank is said to rarely surplus except in years of very good rainfall. The drainage water of the fields irrigated through the tank sluices flows into the surplus stream, and it is supplemented by the springs to such an extent as to admits of anicuts, being built across it and channels being taken off for irrigation, the area thus cultivated being included in the ayacut of the tank.

Three such anicuts have been built across this surplus stream, the second one, called Dayalu anicut, having been constructed some years ago. The third one, the Tatimakula anicut, which consisted originally of rough stone boulders, was washed away and was replaced about 500 feet lower down by an anicut with a masonry bodywall and roughstone apron. This was also washed away and no attempt was made to build another with the result that remissions have been granted annually ever since.

Vide sheet No. 1.

Several designs for its restoration have been prepared at different times, including the one last submitted by Mr. Murray in 1896—estimate to cost Rs. 6,480—but they were all condemned either on the score of expense or defective site.

Proposed site.—Mr. Larminie, who inspected the sites in 1878, selected a mass of rock about 500 feet below the old site and ordered the submission of a plan and estimate (*vide* his inspection notes for 14th to 17th April 1898).

This site is a very good one with hard rock extending from one side of the stream to the other in an oblique direction and gives no fear whatever of the proposed anicut being washed away like its predecessors.

Vide Sheets Nos. 2 and 3.

Description of proposed anicut—The new anicut, which will be 220 feet long in burnt stone and surki mortar, will consist of a body wall founded wholly on hard rock with no apron whatever in rear. The wings which will run in a line with the bodywall, will also be founded on hard rock which will be benched throughout, as shown in the anicut sections, to receive the masonry.

Vide sheets Nos. 4 and 5.

About half an acre of wet land, as detailed in the land plan and statement accompanying, will have to be acquired for the formation of the flood banks, and this has been provided for in the estimate.

Vide sheets Nos. 2 and 7.

A head sluice, consisting simply of a wall with a vent and a small platform for regulation, has been estimated for; and the flood banks close to the wings of the anicut will be protected from scour by roughstone revetments on the upper and lower sides.

Vide sheet No. 6.

Financial particulars.—Since the last anicut breached, only dry rates have been levied on this area, and the amount collected has been Rs. 98 per annum. A further loss of revenue in the shape of second-crop assessment should also be considered, and the Sub-Collector in his No. 4781, dated 13th October 1892, stated that this amounts annually to Rs. 212. The total loss of revenue owing to the breaching of the old anicut is thus Rs. 537. The estimated cost of the anicut now proposed

is Rs. 4,700, and the annual revenue (exclusive of indirect charges, which will be obtained by building the anicut, represents a return of $11\frac{1}{3}$ per cent. on the outlay—a distinctly satisfactory rate of interest.

Hydraulic details.—The calculation sheet accompanying Mr. Murray's report submitted with his estimate of Rs. 6,480 shows the theoretical discharge down the surplus stream to be 7,264 cusecs.

Careful enquiries were made, and people between 50 and 60 years old state that within their memory water never flowed over the tank weir to a greater depth than $2\frac{1}{4}$ feet. Allowing even a margin of 3 inches, the depth can with tolerable certainty be said to have never exceeded $2\frac{1}{2}$ feet. The discharge with this head over the tank weir is 6,406 cusecs. The Dayalu anicut which was constructed about twelve years ago, never had more than 2 feet of water over it as is stated by villagers who own lands close to the anicut. A depth of 4 feet as previously calculated must mean the submersion of a lot of lands on both sides of the stream above the anicut which is not the case as tested by levels. However, to be prepared to meet any unexpected maximum, an anicut 220 feet long has been designed instead of 200 feet with a depth of 4 feet of water to pass over it.

(Signed) A. H. MORIN,
Ex. Engr., Cuddapah Division.

No. 17 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, III Circle, submits an estimate of Rs. 4,700 for reconstructing the Tatimakula anicut, which is one of the anicuts across the surplus channel of the Pedda Tippa Samudram tank, Cuddapah district. The tank has an ayacut of 1,729 acres including the area commanded by the above anicuts, the revenue derived therefrom being Rs. 12,236. The anicut was washed away some years ago, resulting in a loss of revenue annually. It is therefore proposed to reconstruct it on hard rock about 500 feet below the old site. The estimate may be sanctioned.

(Signed) A. W. SMART, Col., R.E.,
11th January 1902. Ag. Chief Engineer for Irrigation.

Order—No. 84 I., dated 20th January 1902.

The following estimate is sanctioned :—

Provincial.
Irrigation.
43. Minor Works and Navigation.
Class IV—Other Minor Works for which neither Capital nor Revenue nor Individual Accounts are kept.
(*a*) In Charge of Public Works Department.
Original Works.
Cuddapah Division.
Reconstructing the Tatimakula anicut across the surplus channel of Pedda Tippa Samudram tank No. 47 of the Revised List of Minor Works, Public Works Department, in the Cuddapah District, appended to G.O., No. 407 I., dated 6th July 1887.

	RS.
Estimate	4,700

2. This sanction is registered as No. 136 I. of 1901–1902.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, III Circle, with plans and estimate.
" Examiner, Public Works Accounts.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd.	} 1902.	*Enclosures*	
Regd.		*Spare copies*	

G.O., Nos. 85, 86 I., 20th January 1902.

JANUARY.

Drainage Sluice

Forwarding a copy of the Proceedings sanctioning the estimate of Rs. 3,800 for constructing a — on the right bank of the Velappar at 76/5 mile, Nannilam taluk, Tanjore division.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers :—

From the Superintending Engineer,		V Circle,	dated	23rd	Nov.	1901,	No.	406 E.I.
To the	,,	,,	V ,,	,,	27th	,,	,,	,,	115 T.J.
From the	,,	,,	V ,,	,,	4th	Jan.	1902	,,	11 E.I.

Enclosure.

Report to accompany the estimate for constructing a drainage sluice in Velappar R.B. 76/5 for Mungikkudi channel surplus in Omakulam limits.

	RS.
Amount of Estimate	3,020

The drainage waters of Thillanayaganallur and Thattithemalai, etc., villages fall in the Kangalancheri irrigation channel below its head sluice on the right bank of Velappar, mile 75/2, which, as a whole, surpluses into Mungikkudi channel offtaking on the right bank of the same river in mile 75/3. This water at present falls in Velappar right bank, mile 76/5, through a surplus calingulah provided with dam stones which is now out of order and out of use as shown in the survey sketch. During floods Velappar backs up and the country suffers in general, not only owing to the collection of drainages here, but also owing to the flood water backing up. To remedy this evil it is proposed to construct a drainage sluice as per plan and section herewith with screw shutters, since swing shutters cannot answer well as the bed of Velappar is on a very high level. As the calingulah is not sound, it is proposed to construct a separate drainage sluice.

Specification.—Work to be carried out as per standard specification.

(Signed) C. S. SRINIVASA AIYAR,
Sub-Division Officer, Máyavaram.

No. 10 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, V Circle, submits an estimate of Rs. 3,020 for constructing a drainage sluice in the right bank of the Velappar at 76/5 mile where the drainages of the Thillanayaganallur and Thattithemalai, etc., villages and the surplus of the Mungikkudi channel fall into the Velappar. These drainages at present flow into the Velappar through a surplus calingulah on the left bank of the Mungikkudi channel which is now in bad order, the result being that the Velappar backs up during floods, and the country around suffers in general. The proposed sluice is intended to remedy this evil. The estimate may be sanctioned.

2. The work is classed as "unremunerative" as it is not directly remunerative in itself, but being required for the full development of the Cauvery delta system may be charged to the Open Capital account thereof. It will probably be completed by the 31st March 1903.

7th January 1902.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

ORDER—No. 85 I., dated 20th January 1902.

The following estimate is sanctioned :—

Imperial.
Irrigation.
49. Capital Expenditure not charged to Revenue.
Cauvery Delta System.
Cauvery Section.
Open Capital Account.
I. Works.
4. Drainage and Protective Works.
C. Works.
Unremunerative Work.
Constructing a drainage sluice on the right bank of the Velappar at 76/5 mile.

	RS.
Estimate—	
I. Works	3,020
II. Establishment	695
III. Tools and plant	85
Total ...	3,800

2. This sanction is registered as No. 135 I. of 1901–1902, and will expire on the 31st March 1903.

3. Ordered that a copy of these Proceedings be forwarded to the Government of India for information.

[Here enter No. 86 I., dated 20th January 1902]

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
„ Superintending Engineer, V Circle, with plans and estimates.
„ Examiner, Public Works Accounts.

ENDORSEMENT—No. 86 I., dated 20th January 1902.

Forwarded.

(By order.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd.	} 1902.	*Enclosures*	
Regd.		*Spare copies*	

G.O., Nos. 87, 88 I., 20th January 1902.

JANURAY.

Vadagarai Channel, Periyar Project

Forwarding a copy of the Proceedings sanctioning the estimate, amounting to Rs. 12,000 including establishment and tools and plant charges, for improving the —.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers :—

From the Superintending Engineer, VI Circle, dated 16th November 1901, No. 1274 M.D.

ENCLOSURE.

REPORT to accompany the Estimate for repairing and improving Vadagarai Channel.

Amount of Estimate —	RS.
Improvements	12,560

General.—The channel formerly took off with an open head from the left bank of the Vagai river above Peranai anicut, but the portion at the head for about 4 furlongs was absorbed into the Periyár main channel and a head sluice of two vents, each 10′ × 6′, was constructed in the right bank of the Periyár main channel.

Ayacut.—The channel has to irrigate about 2,096 acres directly and to supply Vadagarai kanmoy of Sholavandan village, which has an ayacut of nearly 2,600 acres. It formerly supplied Kattakulam and other connected tanks as well as the Vadagarai kanmoy and the lands directly irrigated.

Chakarai Anicut.—There is an anicut named Chakarai at 4,261 feet from the head sluice with open masonry heads for the irrigation of wet lands in Vilampatty village. The anicut being in good condition needs only slight improvements, and these are now provided for in the estimate (*vide* plan and estimate).

An important cross-drainage, named Thangayar river, which passes through the Ramarajapuram surplus works, enters the Vadagarai channel at 220th chain, where there is a small weir named Erichaparai, about 24 feet long, with three vents, each 3′ × 3′ 3″. This work is quite incapable of discharging the run-off from a catchment area of nearly 75 square miles. The maximum recorded rainfall near this channel is only 5 inches in 24 hours and it is assumed that 3 inches will run off. Provision is made accordingly for the above discharge, but the maximum observed flood discharge during the last five years is not even 200 cusecs. It is now proposed to construct a weir 129 feet long with falling shutters for a length of 56 feet capable of discharging a run-off of 3 inches in 24 hours over the catchment after deducting what can be absorbed in the main canal. To exclude the flood water and silt from entering the Vadagarai channel, two regulators are now proposed—one above and the other below the surplus weir with flood banks (*vide* plans herewith with survey sketch).

The surplus of Nachikulam tank, which has a catchment area of about 20 square miles, also enters the Vadagarai channel between Erichaparai and the South Indian Railway culvert. Two masonry weirs are proposed, one at 342nd chain and the other at 370th chain, and their combined length is 119 feet. These two weirs discharge 1,879 feet per second (the discharge with 3 inches run-off over the catchment in 24 hours being 1,610 cusecs) which is considered ample on the local experience up to date.

Sluices.—There are a number of open cuts and ruined sluices in the right bank made at the will and pleasure of the ryots. A statement showing the existing and proposed sluices accompanies the estimate.

Channel.—The total length of the channel from the head sluice to the railway culvert is 7 miles. This is divided into three reaches as follows:—

1st Reach.—Head sluice to Chakarai anicut.
2nd Reach.—Chakarai anicut up to Erichaparai.
3rd Reach.—Erichaparai to the South Indian Railway culvert.

The hydraulic details for each reach have been noted on the plans. In the first reach, *i.e.*, up to Chakarai anicut, the right bank is overgrown with prickly-pear, and provision is made in the estimate for the removal of this and for making up the bank with the available silt from cutting so as to form a good inspection path. The second reach is from Chakarai anicut to Erichaparai. The channel in this length more or less runs in deep cutting and there is no proper right bank for inspection purposes as the nanja lands extend to the very margin of the channel on both sides. Provision is made in the estimate for rooting out all bushes and prickly-pear wherever necessary. Third reach, from Erichaparai to the South Indian Railway culvert. This length of channel has a fall of 1 in 2,000 and the right bank is completely overgrown with prickly-pear. This portion of the bank will be raised to 7 feet above bed, with a top width of 4 feet and side slopes 1½ to 1, and all the prickly-pear from the inner edge of the channel to the outer slope of the right bank will be removed and destroyed so as to make the right bank a proper inspection path.

The channel winds about in a few places and it is proposed to straighten the bends as shown on the enclosed tracings from the village revenue survey maps. No compensation for the lands is necessary as all the ryots are quite willing to part with their lands in exchange for lands available in the channel poramboke.

The work will be carried out in accordance to the current departmental standard specifications.

Estimate Form—Abstract—Classified.

Sub-head.	Names of works.	Amount of estimate for individual works.	Total of sub-heads.	Total for each canal or distributary.	Total of each main head.
1	2	3	4	5	6
	IMPERIAL.	RS.	RS.	RS.	RS.
	IRRIGATION.				
	49. *Capital Expenditure not charged to Revenue.*				
	Periyâr Project.				
	Open Capital Account.				
	I. Works.				
	3. Distributaries.				
	Unremunerative.				
	Regarding Vadagarai Channel.				
"B. Land" ..	1. Compensation for land	140			
			140		
"C. Works" ..	2. Improvements to Chakarai anicut	350			
	3. Constructing three 6″ cement pipe sluices, each at Rs. 90	270			
	4. Constructing a 9″ cement pipe sluice with rear cistern.	170			
	5. Constructing three 9″ cement pipe sluices without rear cisterns, each at Rs. 130	390			
	6. Constructing four masonry sluices without rear cisterns, each at Rs. 150	600			
	7. Constructing masonry sluices with rear cisterns, each at Rs. 225	675			
	10. Constructing Erichaparai surplus escape ..	1,005			
	11. Constructing outlet No. 1	525			
	12. Constructing outlet No. 2	720			
			4,705		
"L. Earthwork"	13. Channel-cutting, forming flood bank, etc. ..	4,700			
			4,700		
"O. Miscellaneous."	14. Mile, demarcation and furlong stones	105			
			105		
	Total, I. Works	..	..	9,650	
	II. Establishment ..	..	..	2,187	
	III. Tools and plant ..	..	..	163	
	Total of Estimate ..	..	..	..	12,000

28th August 1901.

(Signed) H. T. KEELING,
Ex. Engr., Madura Divn.

No. 255 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, VI Circle, submits an estimate of Rs. 12,560 for improving the Vadagarai channel, Periyár project. The channel directly irrigates an extent of 2,096 acres and also supplies the Vadagarai tank with an ayacut of 2,600 acres. The proposed improvements consist of regrading the channel, replacing the five ruined sluices by new ones and constructing six new masonry and four cement pipe sluices in the place of the existing pot-sluices and open cuts which will be closed. It is also proposed to construct a weir 129 feet long with falling shutters for a length of 56 feet to dispose of the calculated discharge of the Thangayar surplus the existing calingulah being found inadequate for the purpose. Provision is also made in the estimate for disposing of the surplus of the Natchikulam tank which enters the Vadagarai channel. The estimate, as reduced in this office to Rs. 9,650 by the omission of the two regulators proposed by the Superintending Engineer and by the alterations made in the Thangayar surplus escape, may be sanctioned.

2. The work is classed as "unremunerative" as it is not directly remunerative in itself but being required for the full development of the Periyár project, may be charged to the Open Capital account thereof. It will probably be completed by the 31st March 1902.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

14th December 1901.

Order—No. 87 I., dated 20th January 1902.

The estimate, amounting to Rs. 9,650, or Rs. 12,000 including establishment and tools and plant charges, for improving the Vadagarai channel, Periyár project, is sanctioned.

2. This sanction is registered as No. 137 I. of 1901–1902.

3. Ordered that copy of these Proceedings be forwarded to the Government of India for information.

[Here enter No. 88 I., dated 20th January 1902.]

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
„ Superintending Engineer, VI Circle,
with plans and estimates.
„ Examiner, Public Works Accounts.

Endorsement—No. 88 I., dated 20th January 1902.

Forwarded.

(By order.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. *Spare copies*

G.O., Nos. 89, 90 I., 20th January 1902.

JANUARY.

Duvvur Tank, Penner River Canals System

Forwarding a copy of the Proceedings sanctioning, with remark, the estimate of Rs. 8,200 for constructing a head sluice to the right of the existing weir No. 1 of the — and excavating a leading channel therefrom to the bed of the Kanigiri reservoir.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers:—

From the Superintending Engineer, II Circle, dated 26th November 1901, No. 319 I.

ENCLOSURE.

REPORT to accompany the estimate for the improvements to the Duvvur tank.

	RS.
Amount of estimate	6,600

When the Sangam project estimates were first sanctioned, they provided for a head sluice for the Duvvur tank supply channel in the left bank of the main canal immediately below the head sluice and for improving the existing Duvvur canal (*vide* paragraph 26 of Mr. R. Smith's report, dated 22nd April 1870, printed with G.O., No. 1818, dated 28th July 1870). The Duvvur branch channel was proposed to take off from the Duvvur tank and cross the main canal at a short distance above the drop. The first reach of this channel from the tank to the main canal was designed to act as an auxiliary supply channel to the Duvvur tank during the floods in the Pennér and to draw off water for irrigation from the tank between the freshes in the river (*vide* paragraph 28 of the same report). When the river was low, it was proposed that 100 cubic feet of water should be sent down the main canal to supply the old irrigation under the Duvvur branch. Two regulators were built on both banks of the main canal at the place where it was crossed by the Duvvur branch.

2. Subsequently it was proposed to dispense with the head sluice for the branch channel in the main canal left bank and to utilise the old Duvvur canal for filling the Duvvur tank and irrigating the lands of Padamatipalem and Tarinivoya. The compensation water is still passed through the main canal and then through the right regulator into the Duvvur branch channel. Thus the irrigation under the Duvvur branch is now distributed between the Duvvur canal and the branch. I am not able to trace when and why these alterations were made.

3. The Duvvur canal which now supplies the Duvvur tank takes off from above Sangam anicut and below the junction of the Beraperu with the Pennér and there is an old korambu channel at its head. An old head sluice of four vents of 5′ 0″ × 4′ 6″ has been provided with screw-gearing shutters. The sill of this head sluice is at 98·70 or ·70 feet above that of the main head sluice. The F.S.L. below the head sluice being 104·70, the head sluice is capable of discharging 225 cubic feet when the water is on a level with the crest of the anicut and 315 cubic feet when it is 3″ over the same.

4. The capacity of the Duvvur tank is 1,042·986 millions of cubic feet. The tank can therefore be filled in about 30 days during which time the river is in freshes in ordinary years. The direct irrigation under the Duvvur canal is 1,000 acres and that under the tank is 200 acres. Even this ayacut under the tank is liable to submersion when the Kanigiri reservoir is filled to its proposed F.T.L. of 94·45. The original proposal was to utilise the storage capacity of the Duvvur tank for the Duvvur branch and now that this channel is supplied direct from the river, the storage of tank is not fully utilised except for the 200 acres of irrigation under it.

5. The Duvvur canal is now very badly silted up and it has been proposed to clear it from an estimate to be sanctioned under special repairs. The floods in the river will be utilised for filling the Duvvur tank through the Duvvur canal and through the left regulator of the main canal and the water thus stored in excess of the requirements for the 200 acres will be utilised in supplementing the supply to the Kanigiri reservoir when the latter falls low. The capacity of Kanigiri reservoir is 8,112·614 millions of cubic feet and that of the Duvvur tank being 1,042·986 millions of cubic feet. About one-eighth inch more storage will be available for the supply to the lands under the reservoir.

6. It is, therefore, proposed to build a head sluice of two vents of 6·0′ × 4·0′ with sill at 90·00 or 8″ below F.T.L. to the right of the existing weir No. 1 on the Duvvur tank and to dig a leading channel therefrom to the bed of the Kanigiri reservoir at 84·00.

7. The work is not remunerative but is required for the development of the project as additional storage is required in the interests of the irrigation, as the river supply is very precarious. The work is recommended for sanction under 49. Open Capital Pennér River Canal System.

10th October 1901. (Signed) R. A. SRINIVASA AIYANGAR,
Executive Engineer, Nellore Division.

From the Collector of Nellore, dated 7th December 1901, No. 3569 D.

No. 3 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, II Circle, submits an estimate of Rs. 6,600 for constructing a head sluice to the right of the existing weir No. 1 of the Duvvur tank, Pennér river canals system and excavating a leading channel therefrom to the bed of the Kanigiri reservoir. The proposed work is required for additional storage in the interests of existing irrigation under the reservoir, the river supply being precarious. The estimate may be sanctioned.

2. The work is classed as "unremunerative" as it is not directly remunerative in itself, but being required for the full development of the Pennér river canals system may be charged to the open capital account thereof. It will probably be completed by the 31st March 1903.

3. The Superintending Engineer should report if the Duvvur channel cannot be enlarged at a small expense so as to increase the supplemental supply to the Kanigiri reservoir.

3rd January 1902. (Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

ORDER—No. 89 I., dated 20th January 1902.

The following estimate is sanctioned :—

Imperial.
Irrigation.
49. Capital Expenditure not charged to Revenue.
Pennér River Canals System.
Open Capital Account.
I. Works.
3. Distributaries.
Unremunerative Work.
Improvements to Duvvur Tank.

	RS.	RS.
C. Works—		
Constructing a sluice in Duvvur tank	4,540	
L. Earthwork—		
Excavating a channel from Duvvur tank	2,060	
Total I. Works		6,600
II. Establishment ...		1,518
III. Tools and Plant ...		82
Total ...		8,200

2. This sanction is registered as No. 144 I. of 1901–1902, and will expire on the 31st March 1903.

3. The attention of the Superintending Engineer, II Circle, will be drawn to paragraph 3 of the note by the Chief Engineer for Irrigation.

4. Ordered that a copy of these Proceedings be forwarded to the Government of India for information.

[Here enter No. 90 I., dated 20th January 1902.]

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, II Circle,
with plans and estimates.
" Examiner, Public Works Accounts.

Endorsement—No. 90 I., dated 20th January 1902.

Forwarded.

(By order.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. *Spare copies*

G.O., Nos. 91, 92 I., 20th January 1902.

JANUARY.

Foot Bridge

Forwarding a copy of the Proceedings sanctioning the estimate of Rs. 1,700 for constructing a — over drop at 5th mile of the eastern channel, Pennéru River Canals system.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers :—

From the Superintending Engineer, II Circle, dated 28th November 1901, No. 331 I.

ENCLOSURE.

REPORT to accompany the Estimate for constructing a foot-bridge over drop at 5th mile of the Eastern Channel.

	RS.
Amount of Estimate	1,320

The bridle-path on the eastern channel is on the right bank from the head down to this drop and on the left from below this down to the trunk road bridge. There is a cattle ramp below this drop where the officers going out on inspection have to cross the channel, and as it runs more than 4′ 6″ deep, it is next to impossible for the officers to cross it. In order to avoid this inconvenience and to provide for an efficient inspection of the channel, it is proposed to construct a foot-bridge in connection with this drop.

2. The high level branch of the eastern channel takes off above this drop and during the rainy season it is sometimes found that the lands under it require water when none is required lower down. The F.S.L. in the channel is 1 foot above the crest of the drop and, in order to maintain it, a lot of water has to be wasted over the drop. It is, therefore, proposed to insert channel iron standards and shutters in order to enable us to hold up water on such occasions.

3. The works are not in themselves remunerative but are required for the development of the project. It is, therefore, recommended that the estimate may be sanctioned under 49. Open Capital, Pennéru River Canals system, as an unremunerative work.

4th October 1901.

(Signed) R. A. SRINIVASA AIYANGAR,
Ex. Engr., Nellore Divn.

No. 6 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, II Circle, submits an estimate of Rs. 1,320 for constructing a foot-bridge over the drop at the 5th mile, eastern channel, Pennéru river canals system. The bridge is required in order to facilitate the inspection of the channel. Provision is also made in the estimate for fitting up shutters to the drop to maintain the full supply level in the channel, the crest of the drop being at present 1 foot below F.S.L. The estimate may be sanctioned.

2. The work is classed as "unremunerative," as it is not directly remunerative in itself but being required for the full development of the Pennéru river canals system, may be charged to the Open Capital Account thereof. It will probably be completed by the 31st March 1903.

4th January 1902.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

ORDER—No. 91 I., dated 20th January 1902.

The following estimate is sanctioned :—

Imperial.
Irrigation.
49. Capital expenditure not charged to Revenue.
Pennéru River Canals System.
Open Capital Account.
I. Works.
3. Distributaries.
C. Works.
Unremunerative Work.
Constructing a foot-bridge over drop at 5th mile of the Eastern channel.

Estimate—

	RS.
I. Works	1,320
II. Establishment	304
III. Tools and Plant	76
Total ...	1,700

2. This sanction is registered as No. 138 I. of 1901–1902, and will expire on the 31st March 1903.

3. Ordered that a copy of these Proceedings be forwarded to the Government of India for information.

[Here enter No. 92 I., dated 20th January 1902.]

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, II Circle, with plans and estimates.
" Examiner, Public Works Accounts.

ENDORSEMENT— No. 92 I., dated 20th January 1902.

Forwarded.

(By order.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd.	1902.	*Enclosures*	
Regd.		*Spare copies*	

G.O., Nos. 93, 94 I., 20th January 1902.

JANUARY.

Administration Report of the Public Works Department, Irrigation Branch, for 1900–1901

Forwarding forty copies of the —.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers :—

Administration Report of the Public Works Department, Irrigation Branch, for 1900-1901.

No. 270 I.

Note by the Chief Engineer for Irrigation.

Submitted to Government.

2. The compilation of the report has been delayed to some extent by the late receipt from the Examiner, Public Works Accounts, of the financial statements which were finally received in this office on the 16th November.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

26th December 1901.

ORDER—No. 93 I., dated 20th January 1902.

The Administration Report of the Public Works Department, Irrigation Branch, for 1900-1901, as drawn up by the Chief Engineer for Irrigation, is approved, and forty copies thereof will be forwarded to the Government of India.

[Here enter No. 94 I., dated 20th January 1902.]

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
,, all Superintending Engineers.
,, the Examiner, Public Works Accounts.
,, the Revenue Department.
,, the Consulting Engineer for Railways.
,, the Chief Engineer, Public Works Department.
,, the Public Department.

ENDORSEMENT—No. 94 I., dated 20th January 1902.

Forwarded.

(By order.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd.	1902.	*Enclosures*
Regd.		*Spare copies*

G.O., No. 109 I., 24th January 1902.

JANUARY.

Provisional Grants (Irrigation) for 1902-1903

Letter from the Government of India sanctioning the —, communicated, with remarks, to the Chief Engineer for Irrigation.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following paper :—

From R. N. BURN, Esq., Deputy Secretary to the Government of India, Public Works Department (Account—Irrigation), to the Secretary to the Government of Madras, Public Works Department, dated Calcutta, 16th January 1902, No. 9 A.—I.

I am directed to acknowledge the receipt of the schedule of demands for Imperial grants for Irrigation works for the year 1902–1903, and in reply to communicate the sanction of the Government of India to the following provisional grants, for which amounts the preliminary issue of the budget estimates should be prepared :—

	RS.
35. Construction of Protective Irrigation works	70,000
42. Major Works—Working Expenses	15,45,000
49. Irrigation	10,50,000

ORDER—No. 109 I., dated 24th January 1902.

Communicated to the Chief Engineer for Irrigation for information and guidance.

2. The provisional grants will be distributed as shown below :—

Systems.	Amount applied for for 1902–1903.	Provisional grant for 1902–1903.
	RS.	RS.
35. Protective Works—Irrigation—		
Rushikulya project	72,000	70,000
42. Major Works—Working Expenses—		
Gódávari delta system	6,04,000	5,97,000
Kistna „	5,48,000	5,08,000
Pennér river canals system	72,300	60,300
Kurnool-Cuddapah canal	1,02,400	92,400
Barur tank project	4,100	4,100
Cauvery delta system	73,500	73,500
Srívaikuntam anicut system	22,600	22,600
Periyár project	1,24,200	1,24,200
Rushikulya project	62,900	62,900
Total ...	16,14,000	15,45,000
49. Capital Expenditure not charged to Revenue—		
Gódávari delta system	90,000	70,000
Kistna „	4,84,000	4,11,000
Pennér river canals system	1,76,000	1,56,000
Cauvery delta system	3,19,000	2,89,000
Periyár project	1,44,000	1,24,000
Total ...	12,13,000	10,50,000

3. Any modification considered necessary by Superintending Engineers in the grants may be carried out in the final issue of the ensuing year's budget estimates, provided the total grant under each head is not affected.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
,, all Superintending Engineers.
,, the Examiner, Public Works Accounts.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras
PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. *Spare copies*

G.O., No. 118 I., 24th January 1902.

JANUARY.

Dumagudiem Anicut

The payment of Rs. 1,663–10–6 to Messrs. Martin & Co. of Cocanada, on account of advances made to coolies for closing the breaches in, and raising the flood embankments of, the —, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers:—

From the	Superintending Engineer, I Circle,	dated	19th Aug. 1901,	No.	2101 G.E.
To the	,, ,, I ,,	,,	28th ,, ,,	,,	61 G.D.
From the	,, ,, I ,,	,,	19th Nov. ,,	,,	2997 G.E.
To the	,, ,, I ,,	,,	23rd ,, ,,	,,	97 G.D.
From the	,, ,, I ,,	,,	17th Dec. ,,	,,	3307 G.E.

No. 20 I.

Note by the Chief Engineer for Irrigation.

The Dumagudiem anicut in the Upper Gódávari was breached and its auxiliary works damaged by the heavy floods of September 1900. The Superintending Engineer on inspecting the works issued orders to the Executive Engineer, Gódávari Eastern division, to raise the flood embankments to 4 feet above M.F.L. besides closing the breaches. As local labour could not be procured for the work, nor coolies induced to go up from Rajahmundry owing to the prevalence of fever in the locality, the Executive Engineer arranged with Messrs. Martin & Co. to take up a portion of the work and import coolies from the delta. Messrs. Martin & Co. accordingly made the necessary arrangements, but as the cost of the works originally proposed was enormous, it was, on reconsideration, thought advisable to defer all but urgent work pending the consideration of the whole question as to the maintenance or abandonment of the Dumagudiem works. Orders were therefore issued to the Executive Engineer to stop the work of raising the embankments.

2. Messrs. Martin & Co. now submit a claim for the payment to them of Rs 1,663–10–6 on account of advances made and expenses incurred in importing coolies prior to the receipt of the order stopping the work. The amount originally claimed by them was Rs. 1,963–10–6, of which they subsequently reported they were able to recover only Rs. 300 from the coolies subsequently employed by them on the Gódávari embankments above Rajahmundry.

3. The Superintending Engineer was requested to ascertain—

(1) why Messrs. Martin & Co. recovered only Rs. 300 out of work done to the value of Rs. 5,000 in raising the embankments above Rajahmundry;

(2) whether any of the men who received advances were employed by them on any work, Public Works Department or other, or whether they were dismissed to their homes and have not since been re-employed without further advance;

(3) whether any of the men to whom fees were paid for the collection of labour have since been re-employed without further fee.

In regard to item (1) Messrs. Martin & Co. state that, as considerable time elapsed between the engagement of the coolies for the Dumagudiem works and the actual commencement of the work at Rajahmundry, the coolies dispersed to their villages and refused to work without further advances, stating that the previous advances had been expended in preparing for their journey to Dumagudiem. The Executive Engineer states that the delay in starting work at Rajahmundry was

unavoidable. With reference to item (2), it is stated that, with the exception of the few men whose names have been entered in the statement of recoveries, none were re-employed by Messrs. Martin & Co. on any of the works.

To item (3) their reply is that none of the men to whom fees were paid for the collection of labour were ever re-employed by them.

4. In these circumstances, it is recommended that the claim of Messrs. Martin & Co. for Rs. 1,663-10-6 be admitted.

16th January 1902.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

Order—No. 118 I., dated 24th January 1902.

The payment of Rs. 1,663-10-6 to Messrs. Martin & Co. is sanctioned.

2. The Superintending Engineer, I Circle, will arrange for the disbursement of the amount charging it to the grant for 43. Minor Works and Navigation—"Agricultural Works—Repairs."

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, I Circle.
" Examiner, Public Works Accounts.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. *Spare copies*

G.O., No. 119 I., 24th January 1902.

JANUARY.

Boat

The estimate of Rs. 720 for constructing a — for the camp clerk of the office of the Superintending Engineer, I Circle, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers:—

From the Superintending Engineer, I Circle, dated 19th November 1901, No. 1393 G.L.
To the Examiner, Public Works Accounts, dated 23rd December 1901, No. 239.
From the „ „ „ „ 8th January 1902 „ 60 B./A.

No. 19 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, I Circle, submits an estimate of Rs. 720 for constructing a boat for his office camp clerk, as there is no sufficient accommodation in his boat for the clerk and office records and much waste of time is caused by the clerk travelling by the radhari boats. The estimate may be sanctioned.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

16th January 1902.

Order—No. 119 I., dated 24th January 1902.

The following estimate is sanctioned:—

Imperial.
Irrigation.
42. Major Works (Working Expenses).
Gódávari Delta System.
5. Tools and Plant.
4. Navigation Plant.
Constructing a boat for the camp clerk of the office of the Superintending Engineer, I Circle.

	RS.
Estimate	720

2. This sanction is registered as No. 146 I. of 1901–1902.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
„ Superintending Engineer, I Circle, with plan and estimate.
„ Examiner, Public Works Accounts.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd.	1902.	*Enclosures*
Regd.		*Spare copies*

G.O., No. 120 I., 24th January 1902.

JANUARY.

Iron second-class Ferry Ballacuts

The estimate of Rs. 1,980 for constructing three — for use in the Kistna Eastern division, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers :—

From the Superintending Engineer, II Circle, dated 28th November 1901, No. 328 I.

No. 18 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, II Circle, submits an estimate of Rs. 1,980 for constructing three iron second-class ferry ballacuts for use in the Kistna Eastern division in place of the existing ones which are reported to be unserviceable. The estimate may be sanctioned.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

16th January 1902.

Order—No. 120 I., dated 24th January 1902.

The following estimate is sanctioned :—

Imperial.
Irrigation.
42. Major Works (Working Expenses).
Kistna Delta System.
Eastern Division.
5. Tools and Plant.
4. Navigation Plant.
Constructing three iron second-class ferry ballacuts in the Kistna Eastern division.

	RS.
Estimate	1,980

2. This sanction is registered as No. 147 I. of 1901–1902.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, II Circle, with one estimate.
" Examiner, Public Works Accounts.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd.	1902.	*Enclosures*
Regd.		*Spare copies*

G.O., Nos. 121, 122 I., 24th January 1902.

JANUARY.

Bodogumala Branch of No. 11 Distributary, Rushikulya Canal

Sanctioning the estimate, amounting to Rs. 1,920, for excavating — and forwarding a copy of the Proceedings to the Government of India for information.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers :—

From the Superintending Engineer, I Circle, dated 14th December 1901, No. 1610 G.N.

Enclosure.

Report to accompany Plans and Estimates for Bodogumala minor branch from No. 11 distributary of Rushikulya Main canal.

	RS.
Amount of Estimate	1,510

This channel was in contemplation for a long time and levels were taken but incompletely. It takes off from the 11th distributary of Rushikulya main canal below drop No. 2 in Jadankuli village limits. It has to irrigate about 500 acres of Bodogumala and Jadankuli villages, including waste, rainfed and dry lands, of which the waste lands are to be sold.

The country after the first 900 feet has a fall and necessary drops are provided to allow the water run regularly, and vents in these drops are just enough to keep the depth allowed in channel intact, while the terminal weir will keep the depth for the last reach.

Early sanction will expedite the sale of waste lands, etc.

(Signed) P. RAMANARAYAN PONDAI,
Special Sub-divisional Officer.

(„) M. LOAM,
Ex. Engineer, Ganjám Divn.

No. 15 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, I Circle, submits an estimate of Rs. 1,510 for excavating the Bodogumala branch of No. 11 distributary, Rushikulya canal. The proposed branch channel is intended to irrigate about 500 acres of Bodogumala and Jadankuli villages. The estimate, as increased in this office to Rs. 1,600 owing to the alterations made in the flooring and revetment of the drops, is recommended for sanction.

2. The work will probably be completed by the 31st March 1903.

9th January 1902.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

ORDER—No. 121 I., dated 24th January 1902.

The following estimate is sanctioned :—

Famine Relief and Insurance.
35. Protective Irrigation Works.
Rushikulya Project.
Open Capital Account.
I. Works.
3. Distributaries.
Rushikulya Canal.
Excavating Bodogumala Branch of No. 11 Distributary.

		RS.
B. Land—		
Compensation for land		230
C. Works—	RS.	
Constructing combined head sluice and drop at head ...	235	
Do. do. at 1,000 feet ...	105	
Do. do. at 3,200 „ ...	105	
Do. do. at 3,500 „ ...	105	
Do. do. at 4,300 „ ...	105	
Do. do. at 4,700 „ ...	105	
Constructing a terminal weir at end	50	
Do. three ramps at 700 feet, 2,900 feet and 400 feet.	60	
		870
L. Earthwork—		
Excavating Bodogumala minor branch		390
O. Miscellaneous—		
Fixing demarcation stones along the land required to be taken up		110
Total I. Works ...		1,600
II. Establishment ...		315
III. Tools and Plant ...		5
		1,920

2. This sanction is registered as No. 145 I. of 1901-1902, and will expire on 31st March 1903.

3. Ordered that a copy of these Proceedings be forwarded to the Government of India for information.

[Here enter No. 122 I., dated 24th January 1902.]

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
„ Superintending Engineer, I Circle, with plans and estimates.
„ Examiner, Public Works Accounts.

ENDORSEMENT—No. 122 I., dated 24th January 1902.

Forwarded.

(By order.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd.	} 1902.		*Enclosures*
Regd.			*Spare copies*

G.O., No. 129 I., 28th January 1902.

JANUARY.

Financial Results of Irrigation

Proceedings, Board of Revenue, forwarding to the Examiner, Public Works Accounts, a statement showing the — under classes I and II works for fasli 1310, and submitting to Government Board's review of the irrigation accounts of fasli 1310 (1900–1901), communicated to the officers concerned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers:—

Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), No. 225, dated 25th September 1901.

Read—again the following papers:—

Proceedings of the Board of Revenue (Rev. Sett., L. Rds. and Agri.), Mis. No. 3822, dated 30th July 1901.

Abstract.—Forwarding to the Examiner of Public Works Accounts a statement showing the financial results of irrigation under classes I and II works for fasli 1310.

Proceedings of the Board of Revenue (Rev. Sett., L. Rds. and Agri.), Mis. No. 4321, dated 22nd August 1901.

Abstract.—Forwarding to the Examiner of Public Works Accounts a statement showing the financial results of irrigation under the Pálár anikat for fasli 1310.

Proceedings of the Board of Revenue (Rev. Sett., L. Rds. and Agri.), Mis. No. 4400, dated 26th August 1901.

Abstract.—Forwarding to the Examiner of Public Works Accounts a statement showing the financial results of irrigation under the Gódávari anikat for fasli 1310.

Resolution—No. 225, dated 25th September 1901.

A statement showing the financial results of irrigation under classes I and II works for fasli 1310 (1900–1901) will be forwarded to the Examiner of Public Works Accounts. As already explained in B.P., Mis. No. 3822, dated 30th July 1901, and Routine No. 2399, dated 20th August 1901, these figures could not be furnished on the prescribed date owing to delays in the receipt of accounts relating to the Gódávari and Pálár anikats and the Periyár project. The last batch of accounts relating to the last named project was received on the 20th instant. The accounts relating to three inam villages and one zamin village are however still due; but in a communication, dated 11th September, No. 842-Bd. & Govt., received from him, the Collector of Madura reports that the water-rate to be charged in these villages on account of Periyár water supplied still remains unsettled, as certain information called for from the Executive Engineer has not been received, and that, considering the delay that has already occurred, the accounts for fasli 1310 may be closed.

2. The following statement compares the actuals of revenue, both under direct and indirect for 1900–1901, due to Imperial class I. Major Productive and Protective Works, with the revised estimates for the year and the actuals for 1899–1900. Except in the case of indirect receipts, in respect of which the gross amounts are shown, the

figures entered in the statement represent net receipts after deducting the usual 5 per cent. allowance for collection charges on all items except the "4 per cent. on the sale-proceeds of tank-bed and other waste lands".

—	Net receipts, direct and indirect.			Gross indirect receipts.		
	Actuals, 1899–1900.	1900–1901. Revised estimate.	1900–1901. Actuals.	Actuals, 1899–1900.	1900–1901. Revised estimate.	1900–1901. Actuals.
1	2	3	4	5	6	7
	RS.	RS.	RS.	RS.	RS.	RS.
Gódávari anikat	25,66,115	28,56,525	29,25,382	1,12,924	1,45,800	1,90,442
Kistna „	25,40,854	25,65,980	26,34,557	1,69,004	1,67,400	1,72,179
Cauvery „	8,13,026	9,22,244	9,20,483	1,12,137	1,15,783	1,17,701
Pennér River canals	2,61,246	3,53,761	3,57,541	43,743	44,961	43,125
Srívaikuntam anikat	1,06,980	1,07,350	1,18,154	1,689	2,000	1,885
Barur tank project	10,898	11,400	10,194	33	..	36
Rushikulya „	91,059	92,960	87,131	2,606	2,800	2,140
Periyár „	3,24,717	3,44,357	3,88,061	20,781	27,870	23,346

3. The actuals for 1900–1901 show, as compared with the previous year, an increase under all the systems except the Barur tank project and the Rushikulya project. The increase is due generally to the favourable character of the season. Under the Gódávari delta there was an increase amounting to Rs. 2,66,414 under second crop and Rs. 34,290 under first crop. The increase under the Kistna delta occurs chiefly under "dry converted into wet, dry crops watered and waste brought under irrigation". The remissions granted during the year amounted to Rs. 11,665 against Rs. 30,974 in the previous year. Under the Cauvery delta only Rs. 14,823 were remitted during the year against Rs. 5,28,582 in the previous year. The increase under the Pennér river canals and the Srívaikuntam anicut is due partly to increase under second crop and partly to smaller remissions granted during the year as shown in the margin. The increase under the Periyár project is due to extension of cultivation. The decrease under the Rushikulya project is due to the introduction of revised water-rate with reference to G.O., No. 558, dated 22nd August 1899. The decrease under the Barur tank project is small and calls for no remark.

—	Fasli.	Second crop.	Remission.
		RS.	RS.
Pennér river canals ..	1310	27,512	10,066
	1309	10,610	72,073
Srívaikuntam anikat.	1310	72,964	7,309
	1309	65,083	17,964

4. Compared with the revised estimates, the actuals of indirect receipts exhibit a large increase in the Gódávari and Kistna deltas. This increase is, however, only nominal, as during the previous year, a large area of irrigated land which should have properly appeared under "waste brought in" was shown in the accounts under "dry converted into wet."

(True Copy and Extract.)

(Signed) R. V. SRINIVASIAR,
Secretary.

Financial results of Irrigation Works of classes I and II for 1900-1901.

System.	Area irrigated.						Direct receipts.					Indirect receipts.					Total of columns 12 and 17
	First crop.			Second crop.			Total irrigation revenue.			Deduct portion due to old irrigation.	Increase of revenue due to the outlay incurred.	Increment of land assessment due to irrigation.	Land assessment of waste land brought under irrigation.	Land revenue of miscellaneous items.	Four per cent. on the amount realized by sale of tank-bed or other waste lands.	Total.	
	Old irrigation.	New irrigation.	Total.	Old irrigation.	New irrigation.	Total.	First crop.	Second crop.	Total.								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Class I.—Imperial Major Productive and Protective Works.																	
1. Rushikulya project	47,614	32,701	80,315	7	2,232	2,239	1,39,579	4,474	1,44,053	54,488	89,565	..	1,457	450	233	2,140	91,705
2. Gódávari anikat	160,028	528,307	688,335	423	136,761	137,184	25,28,416	4,84,467	30,12,883	1,24,000	28,88,883	..	1,84,343	5,633	466	1,90,442	30.79,325
3. Kistna anikat	70,824	528,956	599,780	..	232	222	26,70,599	809	26,71,408	71,000	26,00,408	57,857	88,370	13,967	11,985	1,72,179	27,72,587
4. Pennér river canals	98,126	47,261	145,387	1,301	11,048	12,349	5,62,116	26,790	5,88,906	2,56,000	3,32,906	..	34,190	2,700	6,235	43,125	3,76,031
5. Barur tank project	1,329	1,680	3,009	515	1,604	2,119	10,356	2,337	12,693	2,000	10,693	..	38	..	..	38	10,731
6. Cauvery anikat	745,588	148,826	894,414	34,548	64,627	99,175	39,13,138	3,27,145	42,40,283	33,89,055	8,51,228	..	1,06,365	11,336	..	1,17,701	9,68,929
7. Periyár project	65,441	38,911	104,352	15,878	22,639	38,517	4,81,912	1,06,225	5,88,137	2,03,858	3,84,279	..	3,469	3,540	16,337	23,346	4,07,625
8. Srívaikuntam anikat	14,567	8,477	23,044	6,105	16,566	22,671	1,30,003	71,505	2,01,508	79,000	1,22,508	..	1,557	308	..	1,865	1,24,373
Class II.—Provincial Minor Works and Navigation for which Capital and Revenue Accounts are kept.												..					
1. Ganjám minor rivers system ..	52,283	7,638	59,921	..	13,363	13,363	1,14,148	15,169	1,29,317	96,321	32,996	..	6,296	503	..	6,799	39,795
2. Muniyeru project	104	2,255	2,359	..	..	..	9,998	..	9,998	410	9,588	..	..	157	..	157	9,745
3. Dondapad tank project ..	..	125	125	..	..	..	364	..	364	..	364	..	..	3	..	3	367
4. Cumbum tank	4,887	645	5,532	2,576	..	2,576	26,522	4,306	30,828	30,888	— 60	..	432	25	..	457	397
5. Sagileru "Upper" project ..	4,107	..	4,107	605	..	605	14,571	1,098	15,669	15,163	506	..	9	5	..	14	520
6. Tadapalli channel	9,982	4,396	14,378	182	511	693	1,02,420	2,417	1,04,837	76,075	28,762	..	2,498	51	..	2,549	31,311
7. Arkenkottai channel	2,736	1,526	4,262	6	25	31	29,116	116	29,232	19,809	9,423	..	336	11	..	347	9,770
8. Kalingaroyen do.	8,302	3,145	11,447	8,395	2,019	10,414	68,130	37,762	1,05,892	85,551	20,341	..	415	25	..	440	20,781
9. Cheyaru anikat	14,858	3,057	17,915	1,628	10,141	11,769	45,127	15,385	60,512	30,252	30,260	..	3,117	41	15	3,173	33,433
10. Poiney do.	14,342	..	14,342	2,244	..	2,244	24,042	3,934	27,976	8,431	19,545	..	4,868	26	61	4,955	24,500
11. Pálár do.	53,324	8,728	62,052	13,936	..	13,936	1,24,932	21,492	1,46,424	1,25,000	21,424	..	16,159	174	44	16,377	37,801
12. Vallur do.	3,899	798	4,697	9	201	210	4,344	367	4,711	4,247	464	..	1,023	16	..	1,039	1,503
13. Madras water-supply and Irrigation extension project.	5,568	1,687	7,255	709	676	1,385	15,559	2,860	18,419	11,000	7,419	..	442	57	..	499	7,918
14. Chembrambakam tank ..	11,008	..	11,008	957	..	957	14,672	867	15,539	16,000	— 461	..	832	2	..	834	373
15. Tirukkóyilúr anikat	16,177	6,238	22,415	23	2,503	2,526	84,590	4,914	89,504	61,328	28,176	..	3,028	37	..	3,065	31,241
16. Pelandorai do.	1,978	7,588	9,566	104	341	445	34,727	980	35,707	3,000	32,707	..	32	27	..	59	32,766
17. Shatiatope do.	7,081	21,074	28,155	..	4,492	4,492	96,105	9,486	1,05,591	20,356	85,235	..	14,375	257	..	14,632	99,867
18. Vriddháchalam do.	2,415	4,198	6,613	..	579	579	24,029	1,041	25,070	9,065	16,005	..	256	6	..	262	16,267
19. Mehamattur do.	999	2,776	3,775	..	367	367	16,773	902	17,675	4,213	13,462	..	11	14	..	25	13,487
20. Lower Coleroon anikat ..	44,638	62,767	107,405	156	6,180	6,336	3,82,254	10,889	3,93,143	1,57,692	2,35,451	..	51,707	383	..	52,090	2,87,541
21. Nandiar channel	4,633	269	4,902	1,597	407	2,004	15,133	3,430	18,563	16,838	1,725	..	20	12	..	32	1,757
22. Marudur anikat	16,937	657	17,594	531	16,315	16,846	117,931	70,545	1,88,476	1,15,599	72,877	..	224	41	..	265	73,142

Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), No. 246, dated 10th October 1901.

RESOLUTION—No. 246, dated 10th October 1901.

The Board begs to submit its review of the results of irrigation under classes I to IV Works during fasli 1310 (1900–1901), together with the usual statements.

The following comparative statement shows the areas occupied and the areas actually irrigated or charged as such and the revenue derived under all classes of works during 1899–1900 and 1900–1901 :—

Items.	Area occupied.		Area actually irrigated or charged as irrigated.		Total land and irrigation revenue.	Share due to irrigation.	Deduct remissions.	Net revenue due to irrigation.
	First crop.	Second crop.	First crop.	Second crop.				
1	2	3	4	5	6	7	8	9
Class I Works.	ACS.	ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.
1899-1900	2,505,087	228,790	2,464,590	226,862	1,46,36,818	1,11,75,731	8,32,946	1,03,42,785
1900-1901	2,543,766	315,222	2,538,636	314,476	1,52,23,822	1,16,71,527	2,11,656	1,14,59,871
Difference ..	+ 38,679	+ 86,432	+ 74,046	+ 87,614	+ 5,87,004	+ 4,95,796	− 6,21,290	+11,17,086
Class II Works.								
1899-1900	440,154	103,340	419,844	97,875	25,23,661	18,21,543	2,96,953	15,24,590
1900-1901	442,289	98,299	419,825	91,778	24,91,438	17,89,717	2,16,270	15,73,447
Difference ..	+ 2,135	− 5,041	− 19	− 6,097	− 32,223	− 31,826	− 80,683	+ 48,857
Class III Works.								
1899-1900	102,543	77,112	98,644	76,017	851,488	7,18,190	29,869	6,88,321
1900-1901	124,712	95,628	122,086	92,483	9,33,019	7,76,078	20,064	7,56,014
Difference ..	+ 22,169	+ 18,516	+ 23,442	+ 16,466	+ 81,531	+ 57,888	− 9,805	+ 67,693
Class IV Works.								
1899-1900	2,375,679	678,237	2,021,573	631,704	1,10,29,828	82,77,223	17,57,999	65,19,224
1900-1901	2,361,881	700,886	2,263,921	694,760	1,09,81,684	82,44,878	10,15,272	72,29,609
Difference ..	− 13,798	+ 22,649	+ 242,348	+ 63,056	− 48,144	− 32,345	− 7,42,727	+ 7,10,382
Total .. 1899-1900 ..	5,423,463	1,087,479	5,004,651	1,032,458	2,90,41,795	2,19,92,687	29,17,767	1,90,74,920
Total .. 1900-1901 ..	5,472,648	1,210,035	5,344,468	1,193,497	2,96,29,963	2,24,82,200	14,63,262	2,10,18,938
Difference ..	+ 49,185	+ 122,556	+ 339,817	+ 161,039	+ 5,88,168	+ 4,89,513	−14,54,505	+19,44,018

Taking all classes of works together, the area charged as irrigated showed an increase of 339,817 acres or 6·8 per cent. under first and 161,039 acres or nearly 15·6 per cent. under second crop as compared with 1899–1900. The total revenue demand for land that was irrigated amounted to Rs. 296·30 lakhs, of which the share due to irrigation was Rs. 224·82 lakhs or 76 per cent. Deducting Rs. 14·63 lakhs remitted during the year against Rs. 29·18 lakhs remitted in the previous year, the net revenue to be credited to irrigation amounted to 210·19 lakhs against 190·75 lakhs in 1899–1900. The increase was due to the more favourable season.

As compared with the previous year (1899–1900), under class I works, there was an increase in the irrigation revenue of Rs. 11,17,086. There was an increase under all the systems except the Rushikulya and Barur projects. The variations have been explained in paragraph 3 of B.P., No. 225, dated 25th September 1901.

	RS.
Increase.	
Gódávari anikat	3,00,704
Kistna ,,	95,460
Cauvery ,,	5,35,624
Pennér river canals	1,02,060
Srivaikuntam anikat	11,587
Periyár project	74,802
Total	11,20,237
Decrease.	
Rushikulya project	2,405
Barur tank ,,	746
Total	3,151
Net increase (Rs. 11,20,237—3,151)	11,17,086

Under class II Works, there was an increase of Rs. 48,857, being the net result of a gross increase of Rs. 1,48,651 under fourteen systems and a gross decrease of Rs. 99,794 under eight others as noted in the margin*. The increase under the Cumbum tank, Lower Coleroon, Shatiatope, Vriddhachalam, Mehamattur and Tirukkóyilúr anikats is attributable to less remissions having been granted during the year under report. There was a slight decrease, however, in the extent irrigated under the Shatiatope and Tirukkóyilúr anikats due to the deduction from the statistics relating to each of these systems of certain areas erroneously shown in the accounts of the previous years as belonging to them. The increase under the Muniyeru project was due to extension of irrigation to additional villages and that under Sagileru Upper project occurs under second crop. The increase under the Ganjám minor rivers systems was due partly to the inclusion under that system of the statistics relating to the Mobagam channel with reference to the Chief Engineer's letter, No. 283-M., dated 19th November 1900, and partly to the increase in cultivation under second crop. The increase under the other systems is small and calls for no remarks. The decrease under all systems except the Pelandorai anikat and Dondapad project was due to insufficient supply of water under the systems concerned. The decrease under the Pelandorai anikat occurs under second crop. The decrease under the Dondapad tank project was small.

	RS.
** Increase.*	
Cumbum tank	11,422
Thadapalli channel	743
Arakankottai ,,	867
Kalingaroyan anikat	681
Lower Coleroon ,,	96,865
Shatiatope anikat	5,393
Vriddhachalam anikat	3,403
Mehamattur anikat	1,956
Marudur anikat	332
Tirukkóyilúr anikat	5,946
Ganjám minor rivers system	6,441
Nandiyar channel	156
Muniyeru project	7,548
Sagileru upper project	6,948
Total	1,48,651
Decrease.	
Pálár anikat	37,178
Pelandorai anikat	2,201
Chembarambakam tank	37,150
Madras water-works supply and irrigation extension project	5,169
Vallur anikat	2,836
Cheyyar ,,	4,721
Poiney ,,	10,534
Dondapad tank project	5
Total	99,794
Net increase (Rs. 1,48,651—99,794)	48,857

Under class III Works there was an increase of Rs. 67,693, being the net result of a gross increase of Rs. 71,382 in the Vizagapatam and Coimbatore districts and a gross decrease of Rs. 3,689 in Chingleput, South Arcot, Tinnevelly and Salem as shown in the margin. The increase in Vizagapatam was due to the inclusion of

	RS.
Increase.	
Vizagapatam	55,223
Coimbatore	16,159
Total	71,382

the statistics relating to certain channels which have been ascertained from the Public Works Department to be connected with the Sarada and Varaha river systems. In Coimbatore the ryots took advantage of favourable freshes in the Amaravati river to extend the area of wet cultivation. The decrease in Chingleput occurs under second crop and that in Tinnevelly was due to larger remissions granted during the year than in the previous year. The decrease in the other two districts is small and calls for no remarks.

Under class IV Works there was an increase of Rs. 7,10,382 being the net result of a gross increase of Rs. 8,28,329 in fifteen districts and a gross decrease of Rs. 1,17,947 in three districts, viz., Vizagapatam, Bellary and Chingleput. The decrease in Vizagapatam was due to the transfer of certain channels from class IV to class III Works and that in the other two districts was due to the unfavourable character of the season in those districts.

The growth of irrigation revenue under the different classes of works during the last five years is exhibited in the subjoined statement. It will be seen that there has been an improvement in the revenue credited to all classes of works.

Decrease.	RS.
Chingleput	1,236
South Arcot	551
Tinnevelly	1,571
Salem	331
Total ..	3,689
Increase.	RS.
Ganjám	8,547
Gódávari	1,61,254
Kistna	1,08,634
Nellore	62,170
Cuddapah	73,101
Anantapur	13,363
Kurnool	63,028
North Arcot	6,867
South Arcot	38,498
Tanjore	10,564
Trichinopoly	15,162
Madura	72,495
Tinnevelly	146,752
Coimbatore	43,935
Salem	3,959
Total ..	8,28,329
Decrease.	RS.
Vizagapatam	7,384
Bellary	5,569
Chingleput	1,04,994
Total ..	1,17,947
Net increase (Rs. 8,28,329—1,17,947) ..	710,382

Fasli.	Class I.			Class II.			Class III.		
	Share due to irrigation.	Deduct remissions.	Net revenue due to irrigation.	Share due to irrigation.	Deduct remissions.	Net revenue due to irrigation.	Share due to irrigation.	Deduct remissions.	Net revenue due to irrigation.
1	2	3	4	5	6	7	8	9	10
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
1306	1,05,43,813	4,76,045	1,00,67,768	17,88,307	60,798	17,27,509	7,05,297	53,239	6,52,058
1307	1,10,62,002	1,73,134	1,08,88,868	18,16,967	47,172	17,69,795	7,10,042	7,592	7,02,450
1308	1,13,58,223	1,74,948	1,11,83,275	18,77,958	19,562	18,58,396	7,13,167	6,197	7,06,970
1309	1,11,75,731	8,32,946	1,03,42,785	18,21,543	2,96,953	15,24,590	7,18,190	29,869	6,88,321
1310	1,16,71,527	2,11,656	1,14,59,871	17,89,717	2,16,270	15,73,447	7,76,078	20,064	7,56,014

Fasli.	Class IV.			Total.		
	Share due to irrigation.	Deduct remissions.	Net revenue due to irrigation.	Share due to irrigation.	Deduct remissions.	Net revenue due to irrigation.
	11	12	13	14	15	16
	RS.	RS.	RS.	RS.	RS.	RS.
1306	82,87,610	13,27,530	69,60,080	2,13,25,027	19,17,612	1,94,07,415
1307	84,98,117	9,06,192	75,91,925	2,20,87,128	11,34,090	2,09,53,038
1308	86,92,520	4,07,369	82,85,151	2,26,41,868	6,08,076	2,20,33,792
1309	82,77,223	1,75,799	65,19,224	2,19,92,687	29,17,767	1,90,74,920
1310	82,44,878	10,15,272	72,29,606	2,24,82,200	14,63,262	2,10,18,938

The following statement compares the area irrigated under the Kurnool-Cuddapah Canal and the revenue derived therefrom during the year under review with the corresponding figures for the preceding year.

District.		Area irrigated.				Gross demand.	Remissions.	Net demand.
		First crop.		Second crop.				
		Wet.	Dry.	Wet.	Dry.			
1		2	3	4	5	6	7	8
		ACS.	ACS.	ACS.	ACS.	RS.	RS.	RS.
Kurnool	1309 ..	13,334	40,758	615	2,764	1,11,471	21	1,11,450
	1310 ..	10,932	19,577	2,332	1,778	94,360	..	* 94,360
	Difference ..	— 2,402	— 21,181	+ 1,717	— 986	— 17,111	— 21	— 17,090
Cuddapah	1309 ..	12,111	4,668	1,802	1,164	66,231	1,255	64,976
	1310 ..	12,567	6,552	4,602	3,819	88,899	1,779	87,120
	Difference ..	+ 456	+ 1,884	+ 2,800	+ 2,655	+ 22,668	+ 524	+ 22,144
Total	1309 ..	25,445	45,426	2,417	3,928	1,77,702	1,276	1,76,426
	1310 ..	23,499	26,129	6,934	5,597	1,83,259	1,779	1,81,480
	Difference ..	— 1,946	— 19,297	+ 4,517	+ 1,669	+ 5,557	+ 503	+ 5,054

* Exclusive of Rs. 790 being the charge for water-supplied to the Kurnool Municipality.

The total area irrigated under the canal including the extent of dry crops watered was 62,159 acres against 77,216 acres in the previous year being a decrease of 15,057 acres. The decrease is the net result of a decrease of 22,852 acres in the Kurnool district and an increase of 7,795 acres in the Cuddapah district. The decrease in the Kurnool district was due to the more favourable character of the season and occurs under dry crops irrigated. The increase in the Cuddapah district occurs under second crop area and is due to certain improvements effected, such as opening of a new sluice and construction of some canal doruvu wells, which resulted in an increased supply being available for second crop. The revenue realized shows an increase notwithstanding the fact that there was a decrease of 15,057 acres in the extent irrigated. This is due to the crops raised in the Cuddapah district, viz., indigo and garden crops having yielded higher water-rates, while the decrease in revenue in the Kurnool district occurs under "Dry crop" charged with a water-rate of one rupee and less.

(True Copy and Extract.)

(Signed) R. V. SRINIVASIAR,
Secretary.

APPENDIX I.

STATEMENT showing the total area occupied, the area actually irrigated or charged as irrigated, and the revenue derived for fasli 1310 (1900–1901) in comparison with the previous year.

Particulars.	—	Area occupied.		Area actually irrigated or charged as irrigated.		Total land and irrigation revenue.	Share due to irrigation.	Deduct remissions and deductions.	Net revenue due to irrigation.
		First crop.	Second crop.	First crop.	Second crop.				
1	2	3	4	5	6	7	8	9	10
IMPERIAL.		ACS.	ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.
Class I.—Major Productive and Protective Works.									
Gódávari delta ..	1899–1900 ..	687,375	66,820	683,205	66,407	40,07,842	28,65,133	1,52,954	27,12,179
	1900–1901 ..	690,523	137,379	688,335	137,184	43,67,716	31,64,974	1,52,091	30,12,883
	Difference ..	+ 3,148	+ 70,559	+ 5,130	+ 70,777	+ 3,59,874	+ 2,99,841	— 863	+ 3,00,704
Kistna delta ..	1899–1900 ..	591,435	554	588,801	553	33,79,360	26,06,922	30,974	25,75,948
	1900–1901 ..	600,829	222	599,780	222	34,63,921	26,83,073	11,665	26,71,408
	Difference ..	+ 9,394	— 332	+ 10,979	— 331	+ 84,561	+ 76,151	— 19,309	+ 95,460
Cauvery anikat ..	1899–1900 ..	888,322	95,038	859,268	94,855	54,59,566	42,33,241	5,28,582	37,04,659
	1900–1901 ..	895,524	99,293	894,414	99,175	54,93,323	42,55,106	14,823	42,40,283
	Difference ..	+ 7,202	+ 4,255	+ 35,146	+ 4,320	+ 33,757	+ 21,865	— 5,13,759	+ 5,35,624
Pennér river canals ..	1899–1900 ..	139,434	4,628	136,070	4,613	7,04,934	5,58,919	72,073	4,86,846
	1900–1901 ..	145,526	12,350	145,387	12,349	7,48,068	5,98,972	10,066	5,88,906
	Difference ..	+ 6,092	+ 7,722	+ 9,317	+ 7,736	+ 43,134	+ 40,053	— 62,007	+ 1,02,060
Srívaikuntam anikat.	1899–1900 ..	22,802	19,608	22,152	18,938	2,33,569	2,07,885	17,964	1,89,921
	1900–1901 ..	23,476	23,035	23,044	22,671	2,35,079	2,08,817	7,309	2,01,508
	Difference ..	+ 674	+ 3,427	+ 892	+ 3,733	+ 1,510	+ 932	— 10,655	+ 11,587
Barur tank project ..	1899–1900 ..	3,113	2,451	3,113	2,451	16,177	13,447	8	13,439
	1900–1901 ..	3,009	2,119	3,009	2,119	15,326	12,693	..	12,693
	Difference ..	— 104	— 332	— 104	— 332	— 851	— 754	— 8	— 746
Rushikulya project ..	1899–1900 ..	78,609	3,186	78,608	3,186	2,25,883	1,47,684	1,226	1,46,458
	1900–1901 ..	80,315	2,239	80,315	2,239	2,24,095	1,44,451	398	1,44,053
	Difference ..	+ 1,706	— 947	+ 1,707	— 947	— 1,788	— 3,233	— 828	— 2,405
Periyár project ..	1899–1900 ..	93,997	36,505	93,373	35,859	6,09,487	5,42,500	29,165	5,13,335
	1900–1901 ..	104,564	38,585	104,352	38,517	6,76,294	603,441	15,304	5,88,137
	Difference ..	+ 10,567	+ 2,080	+ 10,979	+ 2,658	+ 66,807	+ 60,941	— 13,861	+ 74,802
Total of Class I Works	1899–1900 ..	2,505,087	228,790	2,464,590	226,862	1,46,36,818	1,11,75,731	8,32,946	1,03,42,785
	1900–1901 ..	2,543,766	315,222	2,538,636	314,476	1,52,23,822	1,16,71,527	2,11,656	1,14,59,871
	Difference ..	+ 38,679	+ 86,432	+ 74,046	+ 87,614	+ 5,87,004	+ 4,95,796	— 6,21,290	+ 11,17,086
PROVINCIAL.									
Class II.—Minor Works and Navigation for which Capital and Revenue Accounts are kept.									
Pálár anikat ..	1899–1900 ..	75,392	20,355	68,211	17,547	3,45,231	2,58,947	75,345	1,83,602
	1900–1901 ..	74,209	17,593	62,052	13,936	3,32,716	2,47,742	1,01,318	1,46,424
	Difference ..	— 1,183	— 2,762	— 6,159	— 3,611	— 12,515	— 11,205	+ 25,973	— 37,178
Pelandorai anikat ..	1899–1900 ..	10,149	697	10,145	697	55,768	38,802	894	37,908
	1900–1901 ..	9,566	445	9,566	445	52,343	35,764	57	35,707
	Difference ..	— 583	— 252	— 579	— 252	— 3,425	— 3,038	— 837	— 2,201
Chembrambakkam tank.	1899–1900 ..	13,117	5,474	12,113	5,414	76,495	57,774	5,085	52,689
	1900–1901 ..	12,901	1,446	11,008	957	62,780	44,541	29,002	15,539
	Difference ..	— 216	— 4,028	— 1,105	— 4,457	— 13,715	— 13,233	+ 23,917	— 37,150

Statement showing the total area occupied, the area actually irrigated or charged as irrigated, &c.—*cont.*

Particulars.	—	Area occupied.		Area actually irrigated or charged as irrigated.		Total land and irrigation revenue.	Share due to irrigation.	Deduct remissions and deductions.	Net revenue due to irrigation.
		First crop.	Second crop.	First crop.	Second crop.				
1	2	3	4	5	6	7	8	9	10
PROVINCIAL—*cont.*		ACS.	ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.
Class II.—Minor Works and Navigation for which Capital and Revenue Accounts are kept—cont.									
Madras water-supply and Irrigation extension project.	1899-1900 ..	7,560	2,983	7,560	2,983	31,643	23,943	355	23,588
	1900-1901 ..	7,413	1,386	7,255	1,385	27,454	19,986	1,567	18,419
	Difference ..	— 147	— 1,597	— 305	— 1,598	— 4,189	— 3,957	+ 1,212	— 5,169
Cumbum tank ..	1899-1900 ..	5,359	3,730	4,850	1,655	43,346	37,789	18,383	19,406
	1900-1901 ..	5,532	4,318	5,532	2,576	44,554	38,806	7,978	30,828
	Difference ..	+ 173	+ 588	+ 682	+ 921	+ 1,208	+ 1,017	— 10,405	+ 11,422
Thadapalli channel ..	1899-1900 ..	14,314	560	14,300	560	1,25,351	1,04,303	209	1,04,094
	1900-1901 ..	14,380	693	14,378	693	1,26,027	1,04,864	27	1,04,837
	Difference ..	+ 66	+ 133	+ 78	+ 133	+ 676	+ 561	— 182	+ 743
Arakankottai channel	1899-1900 ..	4,267	65	4,258	65	34,296	28,510	145	28,365
	1900-1901 ..	4,262	31	4,262	31	35,017	29,235	3	29,232
	Difference ..	— 5	— 34	+ 4	— 34	+ 721	+ 725	— 142	+ 867
Kalingaroyan channel	1899-1900 ..	11,379	10,013	11,379	9,994	1,19,883	1,05,971	710	1,05,261
	1900-1901 ..	11,447	10,414	11,447	10,414	1,19,928	1,05,927	35	1,05,892
	Difference ..	+ 68	+ 401	+ 68	+ 420	+ 45	— 44	— 675	+ 631
Vallúru anikat ..	1899-1900 ..	5,135	209	4,979	209	14,502	9,093	1,546	7,547
	1900-1901 ..	5,075	210	4,697	210	13,795	8,801	4,090	4,711
	Difference ..	— 60	+ 1	— 282	+ 1	— 707	— 292	+ 2,544	— 2,836
Cheyáru anikat ..	1899-1900 ..	19,292	12,378	18,366	12,080	1,05,059	77,072	11,839	65,233
	1900-1901 ..	18,939	12,217	17,915	11,769	1,03,383	75,853	15,341	60,512
	Difference ..	— 353	— 161	— 451	— 311	— 1,676	— 1,219	+ 3,502	— 4,721
Poiney anikat ..	1899-1900 ..	21,218	3,541	16,193	3,348	1,09,788	81,102	42,592	38,510
	1900-1901 ..	21,174	2,428	14,342	2,244	1,05,271	76,521	48,545	27,976
	Difference ..	— 44	— 1,113	— 1,851	— 1,104	— 4,517	— 4,581	+ 5,953	— 10,534
Lower Coleroon anikat	1899-1900 ..	106,873	5,095	102,285	5,088	6,35,345	3,94,991	98,713	2,96,278
	1900-1901 ..	107,408	6,336	107,405	6,336	6,39,851	3,97,822	4,679	3,93,143
	Difference ..	+ 535	+ 1,241	+ 5,120	+ 1,248	+ 4,506	+ 2,831	— 94,034	+ 96,865
Shatiatope anikat ..	1899-1900 ..	28,804	5,012	28,737	5,012	1,66,068	1,12,817	12,619	1,00,198
	1900-1901 ..	28,155	4,492	28,155	4,492	1,57,775	1,05,672	81	1,05,591
	Difference ..	— 649	— 520	— 582	— 520	— 8,293	— 7,145	— 12,538	+ 5,393
Vriddhachalam anikat	1899-1900 ..	6,472	387	6,378	387	38,736	25,477	3,810	21,667
	1900-1901 ..	6,613	579	6,613	579	38,544	25,070	..	25,070
	Difference ..	+ 141	+ 192	+ 235	+ 192	— 192	— 407	— 3,810	+ 3,403
Mehmattur anikat ..	1899-1900 ..	3,795	294	3,795	294	24,760	16,352	633	15,719
	1900-1901 ..	3,775	367	3,775	367	26,087	17,717	42	17,675
	Difference ..	— 20	+ 73	— 20	+ 73	+ 1,327	+ 1,365	— 591	+ 1,956
Marudur anikat ..	1899-1900 ..	17,584	16,613	17,564	16,609	2,16,967	1,90,035	1,891	1,88,144
	1900-1901 ..	17,598	16,846	17,594	16,846	2,17,164	1,90,258	1,782	1,88,476
	Difference ..	+ 14	+ 233	+ 30	+ 237	+ 197	+ 223	— 109	+ 332
Tirukkóyilúr anikat	1899-1900 ..	22,712	4,132	22,325	4,132	1,33,348	95,549	11,991	83,558
	1900-1901 ..	22,415	2,526	22,415	2,526	1,27,152	89,634	130	89,504
	Difference ..	— 297	— 1,606	+ 90	— 1,606	— 6,196	— 5,915	— 11,861	+ 5,946

Statement showing the total area occupied, the area actually irrigated or charged as irrigated, &c.—*cont.*

Particulars.	—	Area occupied. First crop.	Area occupied. Second crop.	Area actually irrigated or charged as irrigated. First crop.	Area actually irrigated or charged as irrigated. Second crop.	Total land and irrigation revenue.	Share due to irrigation.	Deduct remissions and deductions.	Net revenue due to irrigation.
1	2	3	4	5	6	7	8	9	10
PROVINCIAL—*cont.* *Class II.—Minor Works and Navigation for which Capital and Revenue Accounts are kept*—cont.		ACS.	ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.
Ganjám minor rivers system.	1899-1900 ..	56,861	9,614	56,685	9,614	1,97,052	1,24,885	2.009	1,22,876
	1900-1901 ..	59,921	13,363	59,921	13,363	2,02,614	1,30,511	1,194	1,29,317
	Difference ..	+ 3,060	+ 3,749	+ 3,236	+ 3,749	+ 5,562	+ 5,626	— 815	+ 6,441
Nandiyar channel ..	1899-1900 ..	4,709	1,892	4,709	1,892	25,088	18,468	61	18,407
	1900-1901 ..	4,902	2,004	4,902	2,004	25,378	18,674	111	18,563
	Difference ..	+ 193	+ 112	+ 193	+ 112	+ 290	+ 206	+ 50	+ 156
Dondapad tank project.	1899-1900 ..	118	..	118	..	539	369	..	369
	1900-1901 ..	125	..	125	..	536	364	..	364
	Difference ..	+ 7	..	+ 7	..	— 3	— 5	..	— 5
Munéru project ..	1899-1900 ..	911	..	911	..	4,810	3,646	1,196	2,450
	1900-1901 ..	2,359	..	2,359	..	13,196	9,998	..	9,998
	Difference ..	+ 1,448	..	+ 1,448	..	+ 8,386	+ 6,352	— 1,196	+ 7,548
Sagiléru upper project.	1899-1900 ..	4,133	296	3,983	295	19,586	15,648	6,927	8,721
	1900-1901 ..	4,120	605	4,107	605	19,873	15,957	288	15,669
	Difference ..	— 13	+ 309	+ 124	+ 310	+ 287	+ 309	— 6,639	+ 6,948
Total of Class II works.	1899-1900 ..	440,154	103,340	419,844	97,875	25,23,661	18,21,543	2,96,953	15,24,590
	1900-1901 ..	442,289	98,299	419,825	91,778	24,91,438	17,89,717	2,16,270	15,73,447
	Difference ..	+ 2,135	— 5,041	— 19	— 6,097	— 32,223	— 31,826	— 80,683	+ 48,857
Class III.—Minor Works and Navigation for which neither Capital nor Revenue Accounts are kept but for which continuous records of expenditure and revenue are maintained individually.									
Vizagapatam	1899-1900 ..	19,237	15,194	18,115	14,260	76,720	55,785	8,410	47,375
	1900-1901 ..	41,764	33,060	39,775	30,882	1,60,009	1,14,868	12,270	1,02,598
	Difference ..	+ 22,527	+ 17,866	+ 21,660	+ 16,622	+ 83,289	+ 59,083	+ 3,860	+ 55,223
Chingleput	1899-1900 ..	6,208	1,538	6,019	1,527	22,813	15,813	1,938	13,875
	1900-1901 ..	6,139	909	5,839	899	21,080	14,183	1,544	12,639
	Difference ..	— 69	— 629	— 180	— 628	— 1,733	— 1,630	— 394	— 1,236
South Arcot	1899-1900 ..	12,869	3,864	12,855	3,864	91,779	65,676	572	65,104
	1900-1901 ..	12,676	4,030	12,666	4,030	90,825	65,097	544	64,553
	Difference ..	— 193	+ 166	— 189	+ 166	— 954	— 579	— 28	— 551
Tinnevelly	1899-1900 ..	37,376	35,206	37,332	35,081	4,83,521	4,30,677	4,036	4,26,641
	1900-1901 ..	37,035	35,453	36,764	34,552	4,82,578	4,29,944	4,874	4,25,070
	Difference ..	— 341	+ 247	— 568	— 529	— 943	— 733	+ 838	— 1,571
Coimbatore	1899-1900 ..	26,416	20,883	23,886	20,858	1,74,820	1,48,772	14,913	1,33,859
	1900-1901 ..	26,661	21,744	26,661	21,744	1,76,682	1,50,511	493	1,50,018
	Difference ..	+ 245	+ 861	+ 2,775	+ 886	+ 1,862	+ 1,739	— 14,420	+ 16,159
Salem	1899-1900 ..	437	427	437	427	1,835	1,467	..	1,467
	1900-1901 ..	437	432	381	376	1,845	1,475	339	1,136
	Difference ..	..	+ 5	— 56	— 51	+ 10	+ 8	+ 339	— 331
Total of Class III works.	1899-1900 ..	102,543	77,112	98,644	76,017	8,51,488	7,18,190	29,869	6,88,321
	1900-1901 ..	124,712	95,628	122,086	92,483	9,33,019	7,76,078	20,064	7,56,014
	Difference ..	+ 22,169	+ 18,516	+ 23,442	+ 16,466	+ 81,531	+ 57,888	— 9,805	+ 67,693

Statement showing the total area occupied, the area actually irrigated or charged as irrigated, &c.—*cont.*

Particulars.	—	Area occupied.		Area actually irrigated or charged as irrigated.		Total land and irrigation revenue.	Share due to irrigation.	Deduct remissions and deductions.	Net revenue due to irrigation.
		First crop.	Second crop.	First crop.	Second crop.				
1	2	3	4	5	6	7	8	9	10
PROVINCIAL—*cont.*		ACS.	ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.
Class IV.—Other Minor Works for which neither Capital nor Individual Accounts are kept.									
Ganjám	1899–1900 ..	113,757	5,751	110,370	5,751	2,97,171	1,59,915	14,579	1,45,336
	1900–1901 ..	111,220	5,430	111,196	5,430	2,97,820	1,60,416	6,533	1,53,883
	Difference ..	— 2,537	— 321	+ 826	— 321	+ 649	+ 501	— 8,046	+ 8,547
Vizagapatam	1899–1900 ..	80,900	72,978	69,107	61,816	3,48,578	2,47,917	50,467	1,97,450
	1900–1901 ..	67,768	59,699	67,329	59,266	2,75,079	1,97,489	7,423	1,90,066
	Difference ..	— 13,132	— 13,279	— 1,778	— 2,550	— 73,499	— 50,428	— 43,044	— 7,384
Gódávari	1899–1900 ..	100,925	235	55,067	233	3,27,262	2,13,928	1,72,106	41,822
	1900–1901 ..	103,246	3,153	101,259	3,153	3,49,387	2,31,682	28,606	2,03,076
	Difference ..	+ 2,321	+ 2,918	+ 46,192	+ 2,920	+ 22,125	+ 17,754	—1,43,500	+ 1,61,254
Kistna	1899–1900 ..	30,715	173	15,185	172	1,49,204	1,05,775	88,067	17,708
	1900–1901 ..	39,050	1,007	38,704	1,007	1,94,176	1,33,344	7,002	1,26,342
	Difference ..	+ 8,335	+ 834	+ 23,519	+ 835	+ 44,972	+ 27,569	— 81,065	+ 1,08,634
Nellore	1899–1900 ..	130,686	12,874	97,763	11,495	6,01,665	4,70,792	1,57,703	3,13,089
	1900–1901 ..	131,200	12,713	122,439	12,713	6,00,742	4,68,608	93,349	3,75,259
	Difference ..	+ 514	— 161	+ 24,676	+ 1,218	— 923	— 2,184	— 64,354	+ 62,170
Cuddapah	1899–1900 ..	206,399	65,156	156,818	61,336	9,69,595	7,86,896	2,92,710	4,94,186
	1900–1901 ..	204,600	64,260	187,892	63,303	9,93,919	8,08,358	2,41,071	5,67,287
	Difference ..	— 1,799	— 896	+ 31,074	+ 1,967	+ 24,324	+ 21,462	— 51,639	+ 73,101
Anantapur	1899–1900 ..	129,916	30,903	115,717	30,773	5,31,864	4,47,543	67,315	3,80,228
	1900–1901 ..	130,687	32,641	120,806	32,640	5,38,986	4,53,307	59,716	3,93,591
	Difference ..	+ 771	+ 1,738	+ 5,089	+ 1,867	+ 7,122	+ 5,764	— 7,599	+ 13,363
Bellary	1899–1900 ..	56,080	15,390	53,317	15,390	3,25,429	2,77,383	14,098	2,63,285
	1900–1901 ..	54,802	13,379	52,762	13,379	3,21,373	2,72,467	14,751	2,57,716
	Difference ..	— 1,278	— 2,011	— 555	— 2,011	— 4,056	— 4,916	+ 653	— 5,569
Kurnool	1899–1900 ..	45,460	5,749	34,104	5,678	2,03,763	1,55,565	75,205	80,360
	1900–1901 ..	50,968	7,523	48,226	7,511	2,28,304	1,76,144	32,756	1,43,388
	Difference ..	+ 5,508	+ 1,774	+ 14,122	+ 1,833	+ 24,541	+ 20,579	— 42,449	+ 63,028
Chingleput	1899–1900 ..	357,707	44,230	330,663	43,032	12,43,341	8,69,119	1,06,039	7,63,080
	1900–1901 ..	355,779	36,370	338,089	36,357	12,04,672	8,31,511	1,73,425	6,58,086
	Difference ..	— 1,928	— 7,860	+ 7,426	— 6,675	— 38,669	— 37,608	+ 67,386	— 1,04,994
North Arcot	1899–1900 ..	216,783	72,072	172,233	67,160	11,19,940	8,19,365	2,20,374	5,98,991
	1900–1901 ..	214,983	88,352	193,103	87,193	11,10,146	8,12,698	2,06,840	6,05,858
	Difference ..	— 1,800	+ 16,280	+ 20,870	+ 20,033	— 9,794	— 6,667	— 13,534	+ 6,867
South Arcot	1899–1900 ..	283,520	63,383	267,163	61,728	14,88,361	10,24,124	82,950	9,41,174
	1900–1901 ..	274,365	62,888	272,693	62,886	14,44,275	9,96,320	16,648	9,79,672
	Difference ..	— 9,155	— 495	+ 5,530	+ 1,158	— 44,086	— 27,804	— 66,302	+ 38,498
Tanjore	1899–1900 ..	55,105	4,754	52,469	4,393	1,80,082	1,32,947	12,887	1,20,060
	1900–1901 ..	54,898	6,277	54,835	6,277	1,77,508	1,31,328	704	1,30,624
	Difference ..	— 207	+ 1,523	+ 2,366	+ 1,884	— 2,574	— 1,619	— 12,183	+ 10,564
Trichinopoly	1899–1900 ..	127,168	42,941	121,665	42,153	7,70,533	5,60,400	26,256	5,34,144
	1900–1901 ..	127,190	47,050	126,216	47,050	7,66,302	5,56,298	6,992	5,49,306
	Difference ..	+ 22	+ 4,109	+ 4,551	+ 4,897	— 4,231	— 4,102	— 19,264	+ 15,162

Statement showing the total area occupied, the area actually irrigated or charged as irrigated, &c.—*cont.*

Particulars.	—	Area occupied.		Area actually irrigated or charged as irrigated.		Total land and irrigation revenue.	Share due to irrigation.	Deduct remissions and deductions.	Net revenue due to irrigation.
		First crop.	Second crop.	First crop.	Second crop.				
1	2	3	4	5	6	7	8	9	10
PROVINCIAL—*cont.*		ACS.	ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.
Class IV.—Other Minor Works for which neither Capital nor Individual Accounts are kept—cont.									
Ma dura	1899–1900 ..	129,353	40,734	91,292	33,339	6,06,201	4,90,231	1,61,772	3,28,459
	1900–1901 ..	125,836	38,181	117,373	38,129	5,74,782	4,62,961	62,007	400,954
	Difference ..	— 3,517	— 2,553	+ 26,081	+ 4,790	—31,419	— 27,270	— 99,765	+ 72,495
Tinnevelly	1899–1900 ..	147,854	73,007	128,356	68,178	9,82,976	8,48,707	1,36,617	7,12,090
	1900–1901 ..	149,662	88,791	149,025	88,723	10,15,182	8,80,308	21,466	8,58,842
	Difference ..	+ 1,808	+ 15,784	+ 20,669	+ 20,545	+ 32,206	+ 31,601	—1,15,151	+ 1,46,752
Coimbatore	1899–1900 ..	49,162	22,015	43,310	20,139	2,78,397	2,29,935	43,103	1,86,832
	1900–1901 ..	51,702	25,972	51,031	25,479	2,90,427	2,39,472	8,705	2,30,767
	Difference ..	+ 2,540	+ 3,957	+ 7,721	+ 5,340	+ 12,030	+ 9,537	— 34,398	+ 43,935
Salem	1899–1900 ..	114,189	105,892	106,974	98,938	6,05,466	4,36,681	35,751	4,00,930
	1900–1901 ..	113,925	107,200	110,943	104,264	5,98,604	4,32,167	27,278	4,04,889
	Difference ..	— 264	+ 1,308	+ 3,969	+ 5,326	— 6,862	— 4,514	— 8,473	+ 3,959
Total ..	1899–1900 ..	2,375,679	678,237	2,021,573	631,704	1,10,29,828	82,77,223	17,57,999	65,19,224
	1900–1901 ..	2,361,881	700,886	2,263,921	694,760	1,09,81,684	82,44,878	10,15,272	72,29,606
	Difference ..	— 13,798	+ 22,649	+ 242,348	+ 63,056	— 48,144	— 32,345	— 742,727	+ 7,10,382

APPEN

Abstract statement of the extent of irrigation and the revenue

Class and names of systems and canals.	Expected ultimate area of irrigation.	Area occupied.		Area charged
		First crop.	Second crop.	First crop.
1	2	3	4	5
IMPERIAL.	ACS.	ACS.	ACS.	ACS.
Class I.—Major Productive and Protective Works.				
Gódávari Anikat System.				
Eastern delta ..				
1. Main canal	..	1,184	..	1,184
2. Bank do.	20,200	35,898	6,140	35,851
3. Cocanada do.	44,000	44,526	12,735	44,519
4. Sámalkót do.	29,000	29,655	5,522	29,655
5. Mandapet do.	28,000	33,380	12,784	33,380
6. Coringa do.	32,000	33,174	4,628	33,167
7. Injiram do.	16,800	17,140	3,554	17,140
8. Junction do.	..	6,599	1,680	6,599
Total, Eastern delta ..	170,000	201,555	47,043	201,495
Central delta ..				
1. Main canal	1,000	107	172	107
2. Gunnavaram do.	47,880	40,883	7,992	40,639
3. Bank do.	29,650	37,376	3,791	37,187
4. Amalápuram do.	31,350	31,174	5,300	31,157
5. Bendamurlanka do.	12,540	10,738	485	10,645
Total, Central delta ..	122,420	120,278	17,740	119,735
Western delta ..				
1. Main canal	1,000	1,250	763	1,234
2. Kakaraparru canal	8,500	12,166	4,576	12,078
3. Gostanadi and Velpur canal ..	39,000	45,418	9,000	45,406
4. Bank canal	28,000	36,357	14,681	36,264
5. Narsapur do.	59,000	69,299	18,054	68,193
6. Ellore do.	55,000	45,085	2,825	45,033
7. Attili do.	33,000	37,114	12,617	37,028
8. Venkayya and Wyair canal ..	48,080	46,978	3,856	46,930
9. Undi canal	48,000	55,288	2,342	55,258
10. Junction canal	..	19,735	3,882	19,681
Total, Western delta ..	319,580	368,690	72,596	367,105
Total, Gódávari Anikat System ..	612,000	690,523	137,379	688,335
Kistna Anikat System.				
Eastern delta ..				
1. Ellore canal	31,000	62,375	19	62,375
2. Ryves' do.	35,000	51,568	6	51,476
3. Masulipatam canal	34,000	53,961	37	53,959
4. Pulleru do.	80,000	128,892	13	128,351
5. Polrazcodu do.	34,000	26,547	4	26,418
6. Buntumilli do.	12,000	28,448	69	28,424
7. Bank do.	44,000	..	..	..
Total, Eastern delta ..	270,000	351,791	148	351,003
Western delta ..				
1. Main canal	6,000	10,590	..	10,590
2. Nizampatam canal	52,000	67,302	13	67,302
3. Bank do.	67,000	70,543	11	70,534
4. Commamore do.	80,000	100,603	50	100,351
Total, Western delta ..	205,000	249,038	74	248,777
Total, Kistna Anikat System ..	475,000	600,829	222	599,780
Cauvery Anikat System.				
Cauvery section ..				
1. Cauvery	..	201,762	46,310	200,711
2. Codamurti	..	37,051	13,309	37,051
3. Arasalar	..	18,393	1,616	18,393
4. Tirumalrajanar	..	9,836	1,771	9,836
5. Mudikondanar	..	32,939	1,816	32,939
6. Nattar	..	17,917	1,211	17,917
7. Kirthimanar	..	12,079	646	12,079
8. Virasolan	Not fixed.	37,228	2,635	37,228
9. Puthar	..	10,495	253	10,495
10. Solasudamaniyar	..	9,744	342	9,744
11. Manjavoikal	..	15,777	978	15,777
12. Vellappar	..	18,936	341	18,936
13. Mahimalayar	..	11,746	782	11,746
14. Petharasanar	..	2,031	27	2,031

DIX II.

derived from Irrigation works for the fasli year 1310 (1900–1901).

as irrigated.	Area of lands irrigated free of charge included in columns 3 and 4.		Total, land and irrigation revenue.	Share due to irrigation.	Deduct remissions and deductions.	Net revenue due to irrigation.
Second crop.	First crop.	Second crop.				
6	7	8	9	10	11	12
ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.
..	206	..	4,670	4,604	353	4,251
6,140	1,950	..	2,50,872	1,71,846	3,022	1,68,824
12,734	11,702	..	3,19,790	2,27,767	2,975	2,24,792
5,522	10,396	..	1,68,273	1,29,666	366	1,29,300
12,784	774	..	3,23,374	2,23,846	1,126	2,22,720
4,628	8,011	..	2,13,206	1,44,744	2,932	1,41,812
3,554	3,452	..	1,00,022	77,185	1,696	75,489
1,677	3,111	..	25,958	24,957	2,210	22,747
47,039	39,602	..	14,06,165	10,04,615	14,680	9,89,935
172	..	..	1,180	843	10	833
7,992	3,421	..	2,88,184	2,06,645	9,302	1,97,343
3,791	5,125	..	2,26,305	1,65,689	8,180	1,57,509
5,300	6,864	..	1,80,816	1,41,300	18,172	1,23,128
485	2,764	..	56,234	38,770	13,594	25,176
17,740	18,174	..	7,52,719	5,53,247	49,258	5,03,989
748	202	..	8,090	7,924	692	7,232
4,517	..	..	90,476	74,911	2,588	72,323
8,981	7,653	..	2,86,182	2,01,189	18,004	1,83,185
14,639	1,426	..	3,12,755	2,23,220	5,886	2,17,334
18,012	9,121	..	4,72,985	3,40,576	19,851	3,20,725
2,811	5,663	17	2,41,318	1,67,364	1,079	1,66,285
12,617	1,721	..	2,72,248	2,05,385	24,717	1,80,668
3,856	23,009	406	1,59,405	1,27,017	5,461	1,21,556
2,342	19,798	..	2,40,722	1,64,819	7,795	1,57,024
3,882	2,478	..	1,24,651	94,707	2,080	92,627
72,405	71,071	423	22,08,832	16,07,112	88,153	15,18,959
137,184	128,847	423	43,67,716	31,64,974	1,52,091	30,12,883
19	10,856	..	2,92,446	2,48,172	1,872	2,46,300
6	4,960	..	2,74,042	2,26,525	483	2,26,042
37	3,294	..	2,85,721	2,56,986	179	2,56,807
13	22,917	..	6,66,836	5,14,678	3,577	5,11,101
4	4,156	..	1,31,679	1,01,515	1,927	99,588
69	4,369	..	1,43,925	1,10,861	661	1,10,200
..	..	..	..	..	..	..
148	50,552	..	17,94,649	14,58,737	8,699	14,50,038
..	..	..	74,946	56,071	11	56,060
13	569	..	4,48,443	3,34,914	63	3,34,851
11	1,342	..	4,53,957	3,44,008	125	3,43,883
50	3,291	..	6,91,926	4,89,343	2,767	4,86,576
74	5,202	..	16,69,272	12,24,336	2,966	12,21,370
222	55,754	..	34,63,921	26,83,073	11,665	26,71,408
46,204	28,506	5,092	13,43,798	10,69,760	7,239	10,62,521
13,309	7,971	1,573	3,10,558	2,61,127	86	2,61,041
1,616	2,511	191	1,27,933	1,02,144	14	1,02,130
1,769	910	18	77,226	62,027	15	62,012
1,816	2,279	..	2,36,592	1,87,655	24	1,87,631
1,211	851	7	1,24,651	98,196	7	98,189
646	1,341	35	89,053	71,454	..	71,454
2,631	1,646	27	2,30,344	1,74,532	90	1,74,442
253	685	..	74,103	58,993	22	58,971
342	530	..	75,962	61,368	2	61,366
978	1,549	1	80,612	59,138	33	59,105
341	734	..	1,18,280	90,664	36	90,628
782	708	..	63,677	46,824	284	46,540
27	108	..	14,267	11,333	..	11,333

Abstract statement of the extent of irrigation and the revenue

Class and names of systems and canals.	Expected ultimate area of irrigation.	Area occupied. First crop.	Area occupied. Second crop.	Area charged First crop.
1	2	3	4	5
	ACS.	ACS.	ACS.	ACS.
IMPERIAL—*cont.*				
CLASS I.—MAJOR PRODUCTIVE AND PROTECTIVE WORKS—*cont.*				
Cauvery Anikat System—cont.				
Cauvery section—*cont.* 15. Vanjiyar	Not fixed.	3,809	165	3,809
16. Noolar		10,661	575	10,661
17. South Puthar		1,271	14	1,271
18. Manniyar		37,343	4,045	37,343
Total, Cauvery section		489,018	76,836	487,967
Vennar section 1. Vennar	Not fixed.	95,090	9,480	95,090
2. Vettar		47,267	2,886	47,267
3. Odambogyar		51,045	651	51,045
4. Korair		52,757	3,285	52,757
5. Pamaniyar		37,809	2,365	37,809
6. Pandavayar		22,155	326	22,096
7. Vellayar		32,288	891	32,288
8. Athiveraramanar		4,158	102	4,158
9. Harichendranadi		27,953	733	27,953
10. Mulliyar		32,498	1,618	32,498
11. Iyanar		3,486	120	3,486
Total, Vennar section	..	406,506	22,457	406,447
Total, Cauvery Anikat System	..	895,524	99,293	894,414
Srivaikuntam Anikat System.				
1. North Main canal	25,000	10,819	10,466	10,793
2. South do.		12,657	12,569	12,251
Total, Srívaikuntam Anikat	25,000	23,476	23,035	23,044
Barur tank project	6,887	3,009	2,119	3,009
Rushikulya project	Not fixed.	80,315	2,239	80,315
Penner River Canals.				
1. Jaffer Sahib canal	163,385	34,445	2,874	34,441
2. Sarvepalli do.		20,895	1,460	20,876
3. Kistnapatam do.		7,486	427	7,486
4. Nellore tank		6,784	222	6,784
5. Duvvuru canal		5,934	936	5,934
6. Kanigiri do.		69,982	6,431	69,866
Total, Penner River Canals	163,385	145,526	12,350	145,387
Kurnool-Cuddapah Canal.				
1. Kurnool district	Not fixed.	30,509	4,110	30,509
2. Cuddapah do.		19,119	8,421	19,119
Total, Kurnool-Cuddapah Canal	..	49,628	12,531	49,628
Periyar Project	Not fixed.	104,564	38,585	104,352
PROVINCIAL.				
CLASS II.—MINOR WORKS AND NAVIGATION FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.				
Pálár Anikat System.				
Northern section 1. Kaveripak canal	..	19,268	4,297	14,336
2. Mahendravadi do.	..	5,297	492	3,831
3. Govindavadi do.	..	7,232	713	5,901
4. Kambakal do.	..	18,387	995	16,809
Total, Northern section	..	50,184	6,497	40,877
Southern section 1. Dusi canal	..	19,608	9,525	17,206
2. Chakramallur canal	..	3,002	1,227	2,686
3. Kalavai canal	..	1,415	344	1,283
Total, Southern section	..	24,025	11,096	21,175
Total, Pálár Anikat System	68,700	74,209	17,593	62,052
Palandorai anikat system	7,541	9,566	445	9,566
Chembrambakam tank	18,000	12,901	1,446	11,008

* Exclusive of Rs. 790 being value of

derived from Irrigation works for the fasli year 1310 (1900–1901)—*cont.*

as irrigated.	Area of lands irrigated free of charge included in columns 3 and 4.		Total, land and irrigation revenue.	Share due to irrigation.	Deduct remissions and deductions.	Net revenue due to irrigation.
Second crop.	First crop.	Second crop.				
6	7	8	9	10	11	12
ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.
165	306	..	23,818	18,503	1	18,502
575	386	..	67,427	51,773	2	51,771
14	..	..	7,181	5,275	..	5,275
4,045	3,732	215	2,73,571	2,18,164	24	2,18,140
76,724	54,753	7,159	33,39,053	26,48,930	7,879	26,41,051
9,474	9,527	182	5,82,018	4,51,817	328	4,51,489
2,886	4,535	25	3,11,138	2,44,712	133	2,44,579
651	7,751	13	2,68,301	2,01,812	621	2,01,191
3,285	6,676	160	2,24,318	1,54,179	813	1,53,366
2,365	8,177	3	1,55,284	1,09,536	173	1,09,363
326	845	..	1,38,486	1,06,237	835	1,05,402
891	1,650	..	1,70,357	1,24,347	973	1,23,374
102	571	1	21,929	16,476	9	16,467
733	1,034	..	1,33,671	93,057	1,237	91,820
1,618	6,939	6	1,32,239	92,195	1,822	90,373
120	442	..	16,529	11,808	..	11,808
22,451	48,147	390	21,54,270	16,06,176	6,944	15,99,232
99,175	102,900	7,549	54,93,323	42,55,106	14,823	42,40,283
10,458	515	208	1,05,209	94,362	2,643	91,719
12,213	680	320	1,29,870	1,14,455	4,666	1,09,789
22,671	1,195	528	2,35,079	2,08,817	7,309	2,01,508
2,119	130	130	15,326	12,693	..	12,693
2,239	11,908	7	2,24,095	1,44,451	398	1,44,053
2,874	5,959	..	1,84,836	1,48,382	709	1,47,673
1,460	3,069	..	1,02,241	80,380	372	80,008
427	2,657	..	30,128	25,006	70	24,936
221	2,021	..	28,774	22,162	1,893	20,269
936	833	..	33,257	24,805	193	24,612
6,431	9.477	..	3,68,832	2,98,237	6,829	2,91,408
12,349	24,016	..	7,48.068	5,98,972	10,066	5,88,906
4,110	..	..	94,360	94,360	..	94,360
8,421	..	..	88,899	88,899	1,779	87,120
12,531	..	..	183,259	183,259	1,779	181,480
38,517	4,660	486	676,294	603,441	15,304	588,137
2,579	4,362	904	86,579	65,322	39,974	25,348
437	480	41	25,852	20,147	10,512	9,635
713	1,161	100	30,290	22,088	7,440	14,648
995	2,977	121	57,642	40,231	12,657	27,574
4,724	8,980	1,166	2,00,363	1,47,788	70,583	77,205
7,657	2,548	2,512	1,08,008	81,826	27,525	54,301
1,227	156	138	17,483	13,087	2,307	10,780
328	76	70	6,862	5,041	903	4,138
9,212	2,780	2,720	1,32,353	99,954	30,735	69,219
13,936	11,760	3,886	3,32,716	2,47,742	1,01,318	1,46,424
445	314	..	52,343	35,764	57	35,707
957	1,994	200	62,780	44,541	29,002	15,539

water supplied to Kurnool Municipality.

Abstract statement of the extent of irrigation and the revenue

Class and names of systems and canals.	Expected ultimate area of irrigation.	Area occupied.		Area charged
		First crop.	Second crop.	First crop.
1	2	3	4	5
	ACS.	ACS.	ACS.	ACS.
PROVINCIAL—*cont.*				
Class II.—Minor Works and Navigation for which Capital and Revenue Accounts are kept—*cont.*				
Madras Water-supply and Irrigation Extension Project.				
1. Sholavaram tank	9,852	3,074	216	2,916
2. Red Hills tank		4,339	1,170	4,339
Total, Madras Water-supply and Irrigation Extension Project ..	9,852	7,413	1,386	7,255
1. Cumbum tank	Not fixed.	5,532	4,318	5,532
2. Thadapalli channel		14,380	693	14,378
3. Arakankottai do.		4,262	31	4,262
4. Kalingarayen do.		11,447	10,414	11,447
5. Vallur anikat		5,075	210	4,697
6. Cheyar do.		18,939	12,217	17,915
7. Poiney do.		21,174	2,428	14,342
8. Lower Coleroon anikat		107,408	6,336	107,405
9. Shattiyatope anikat		28,155	4,492	28,155
10. Vriddhachallam anikat		6,613	579	6,613
11. Mehamattur do.		3,775	367	3,775
12. Tirukkóyilúr do.		22,415	2,526	22,415
13. Marudur do.		17,598	16,846	17,594
14. Dondapad tank project		125	..	125
15. Munuyeru project		2,359	..	2,359
16. Sagileru do.		4,120	605	4,107
17. Nandiyar channel		4,902	2,004	4,902
Ganjám Minor rivers system.				
Langulia river .. 1. Doosi main channel	Not fixed.	4,329	627	4,329
Langulia river .. 2. Wadada do.	..	9,857	1,874	9,857
Total, Langulia river ..	..	14,186	2,501	14,186
Vamsadhara river .. 1. Purushotapur main channel ..	..	3,555	1,901	3,555
Vamsadhara river .. 2. Byree do. ..	.	11,691	2,796	11,691
Vamsadhara river .. 3. Nagarikatakum do. ..	Not fixed.	2,992	114	2,992
Vamsadhara river .. 4. Jalmur do. ..	..	6,888	1,225	6,888
Vamsadhara river .. 5. Looklam do. ..	..	3,612	317	3,612
Vamsadhara river .. 6. Polaky do. ..	..	11,347	3,378	11,347
Vamsadhara river .. 7. Mobagam do. ..	..	3,673	725	3,673
Total, Vamsadhara river ..	..	43,758	10,456	43,758
Garibula Gedda hill stream	Not fixed.	1,977	406	1,977
Total, Ganjám Minor rivers system ..	..	59,921	13,363	59,921
Class III.—Minor Works and Navigation for which neither Capital nor Revenue Accounts are kept, but for which continuous records of expenditure and revenue are maintained individually.				
Vizagapatam District.				
Sarada river .. 1. Gódávari anikat	Not fixed.	6,141	3,943	6,096
Sarada river .. 2. Mamidivada anikat		1,839	932	1,839
Sarada river .. 3. Dimili do.		864	863	864
Sarada river .. 4. Kattukolu do.		1,349	1,349	1,257
Sarada river .. 5. Kumarapalli do.		1,876	1,874	1,743
Sarada river .. 6. Marripallem do.		732	731	568
Sarada river .. 7. Sarada do.		7,794	3,842	7,556
Total, Sarada river ..	..	20,595	13,534	19,923
Varaha river .. 1. Pallaparti anikat	Not fixed.	6,066	5,634	6,014
Varaha river .. 2. Mallelagedda do.		614	604	568
Varaha river .. 3. Gubbada do.		2,057	1,696	2,057
Varaha river .. 4. Duggada do.		1,282	1,202	1,282
Varaha river .. 5. Varahar		11,150	10,390	9,931
Total, Varaha river ..	..	21,169	19,526	19,852
Total, Vizagapatam District ..	..	41,764	33,060	39,775
Salem District.				
Pennagundapuram tank	Not fixed.	437	432	381

derived from Irrigation Works for the fasli year 1310 (1900–1901)—*cont.*

as irrigated.	Area of lands irrigated free of charge included in columns 3 and 4.		Total, land and irrigation revenue.	Share due to irrigation.	Deduct remissions and deductions.	Net revenue due to irrigation.
Second crop.	First crop.	Second crop.				
6	7	8	9	10	11	12
ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.
216	507	3	11,062	7,306	1,493	5,813
1,169	1,075	417	16,392	12,680	74	12,606
1,385	1,582	420	27,454	19,986	1,567	18,419
2,576	1,800	1,460	44,554	38,806	7,978	30,828
693	471	..	1,26,027	1,04,864	27	1,04,837
31	120	..	35,017	29,235	3	29,232
10,414	847	842	1,19,928	1,05,927	35	1,05,892
210	2,735	9	13,795	8,801	4,090	4,711
11,769	1,706	1,618	1,03,383	75,853	15,341	60,512
2,244	2,101	156	1,05,271	76,521	48,545	27,976
6,336	8,102	156	6,39,851	3,97,822	4,679	3,93,143
4,492	1,524	..	1,57,775	1,05,672	81	1,05,591
579	107	..	38,544	25,070	..	25,070
367	33	..	26,087	17,717	42	17,675
2,526	1,577	23	1,27,152	89,634	130	89,504
16,846	655	531	2,17,164	1,90,258	1,782	1,88,476
..	..	..	536	364	..	364
..	..	..	13,196	9,998	..	9,998
605	1,723	..	19,873	15,957	288	15,669
2,004	40	..	25,378	18,674	111	18,563
627	1,364	..	16,738	10,437	50	10,387
1,874	3,583	..	33,694	21,142	93	21,049
2,501	4,947	..	50,432	31,579	143	31,436
1,901	1,134	..	13,822	9,477	123	9,354
2,796	2,728	..	41,396	27,315	265	27,050
114	795	..	10,774	6,526	164	6,362
1,225	1,960	..	26,482	17,066	282	16,784
317	3,104	..	5,755	3,756	1	3,755
3,378	3,488	..	42,747	27,427	139	27,288
725	2,924	..	5,462	4,006	13	3,993
10,456	16,133	..	1,46,438	95,573	987	94,586
406	165	..	5,744	3,359	64	3,295
13,363	21,245	..	2,02,614	1,30,511	1,194	1,29,317
3,898	3,942	1,815	22,313	16,542	544	15,998
932	1,298	391	5,270	3,807	33	3,774
863	573	573	3,119	2,093	13	2,080
1,257	678	678	5,712	3,949	805	3,144
1,345	729	729	8,355	5,984	1,043	4,941
567	191	191	2,962	1,849	776	1,073
3,599	4,796	1,356	20,989	15,092	1,312	13,780
12,461	12,207	5,733	68,720	49,316	4,526	44,790
5,632	2,300	2,300	25,497	18,827	449	18,378
508	186	186	1,881	1,248	221	1,027
1,696	234	..	8,764	6,815	11	6,804
1,202	78	..	8,763	6,672	..	6,672
9,383	3,565	3,208	45,384	31,990	7,063	24,927
18,421	6,363	5,694	91,289	65,552	7,744	57,808
30,882	18,570	11,427	1,60,009	1,14,868	12,270	1,02,598
376	..	..	1,845	1,475	339	1,136

Abstract statement of the extent of irrigation and the revenue

Class and names of systems and canals.	Expected ultimate area of irrigation.	Area occupied — First crop.	Area occupied — Second crop.	Area charged — First crop.
1	2	3	4	5
PROVINCIAL—*cont.*	ACS.	ACS.	ACS.	ACS.
CLASS III.—MINOR WORKS AND NAVIGATION FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT, BUT FOR WHICH CONTINUOUS RECORD OF EXPENDITURE AND REVENUE ARE MAINTAINED INDIVIDUALLY—*cont.*				
Tinnevelly District.				
Tambraparni river. 1. Ariyanayakapuram anikat ..	Not fixed.	5,303	5,216	5,281
Tambraparni river. 2. Palanur do. ..		8,493	7,966	8,286
Tambraparni river. 3. Suttamalli do. ..		6,393	6,168	6,379
Tambraparni river. 4. Kodamilalaghien do. ..		2,933	2,614	2,933
Tambraparni river. 5. Nathiyuni do. ..		2,499	2,351	2,499
Tambraparni river. 6. Kannadien do. ..		11,414	11,138	11,386
Total, Tinnevelly district ..	..	37,035	35,453	36,764
Chingleput District.				
Madurantakam tank	Not fixed.	6,139	909	5,839
South Arcot District.				
Myorenady .. Kattamailur anikat	Not fixed.	486	165	486
Gadilam river .. 1. Tiruvadi anikat		6,999	2,377	6,997
Gadilam river .. 2. Vanamadevi anikat		782	362	782
Gadilam river .. 3. Tiruvendipuram anikat		2,012	1,042	2,012
Total, Gadilam river ..	..	9,793	3,781	9,791
Kullar river .. Vikravandi anikat	Not fixed.	2,397	84	2,389
Total, South Arcot District ..	..	12,676	4,030	12,666
Coimbatore District.				
Amáravati river .. 1. Cullapuram anikat channel ..	Not fixed.	2,787	2,721	2,787
Amáravati river .. 2. Comaralingam do. ..		1,294	831	1,294
Amáravati river .. 3. Kannadiputtur do. ..		616	605	616
Amáravati river .. 4. Sholamadevi do. ..		526	526	526
Amáravati river .. 5. Kuddattur do. ..		1,115	1,113	1,115
Amáravati river .. 6. Kanniyur do. ..		394	303	394
Amáravati river .. 7. Koratalavu do. ..		585	581	585
Amáravati river .. 8. Alinghirur do. ..		1,033	832	1,033
Amáravati river .. 9. Dalavoyapatnam do. ..		927	385	927
Amáravati river .. 10. Dharapuram do. ..		2,459	1,572	2,459
Amáravati river .. 11. Calinjeevadi do. ..		3,245	1,381	3,245
Amáravati river .. 12. Nanjatalayur do. ..		368	366	368
Amáravati river .. 13. Chinna Dharapuram do. ..		1,893	1,874	1,893
Amáravati river .. 14. Sundakayapalliam do. ..		265	166	265
Amáravati river .. 15. Nanjakalakurchi do. ..		379	388	379
Amáravati river .. 16. Pallapalliam anikat do. ..		3,917	3,544	3,917
Amáravati river .. 17. Tirumanallur Korambu do. ..		978	954	978
Amáravati river .. 18. Karur Balambapuram do. ..		792	628	792
Amáravati river .. 19. Panchamadevi do. ..		293	285	293
Amáravati river .. 20. Sonapatty		562	564	562
Amáravati river .. 21. Puliyur		1,284	1,278	1,284
Amáravati river .. 22. Coyenhully		949	847	949
Total, Amarávati river ..	..	26,661	21,744	26,661
Total, Coimbatore District ..	..	26,661	21,744	26,661
CLASS IV.—OTHER MINOR WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE NOR INDIVIDUAL ACCOUNTS ARE KEPT.				
(Imperial.)				
(*a*) In charge of Public Works Department.				
1. Ganjám	..	50,466	1,545	50,457
2. Vizagapatam	..	10,042	5,764	10,042
3. Gódávari	..	52,731	2,189	52,164
4. Kistna	..	11,749	25	11,749
5. Nellore	..	94,907	7,474	87,457
6. Cuddapah	..	58,937	23,504	54,540
7. Anantapur	..	52,344	9,575	46,584
8. Bellary	..	33,904	7,469	22,432
9. Kurnool	..	22,979	4,642	22,249
10. Chingleput	..	233,349	23,515	2,20,508
11. North Arcot	..	60,981	22,203	51,771
12. South Arcot	..	90,167	17,774	89,382

derived from Irrigation works for the fasli year 1310 (1900–1901)—*cont.*

as irrigated.	Area of lands irrigated free of charge included in columns 3 and 4.		Total, land and irrigation revenue.	Share due to irrigation.	Deduct remissions and deductions.	Net revenue due to irrigation.
Second crop.	First crop.	Second crop.				
6	7	8	9	10	11	12
ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.
5,188	689	297	73,850	66,538	1,343	65,195
7,143	457	153	1,08,910	97,005	637	96,368
6,146	789	413	74,405	66,419	633	65,786
2,614	1,140	563	20,281	16,946	89	16,857
2,351	920	737	22,235	20,260	136	20,124
11,110	461	369	1,82,897	1,62,776	2,036	1,60,740
34,552	4,456	2,532	4,82,578	4,29,944	4,874	4,25,070
899	804	9	21.080	14,183	1,544	12,639
165	1	..	3,497	2,292	..	2,292
2,377	758	35	52,251	38,029	209	37,820
362	96	..	6,903	4,834	6	4,828
1,042	335	42	15,537	11,481	324	11,157
3,781	1,189	77	74,691	54,344	539	53,805
84	54	..	12,637	8,461	5	8,456
4,030	1,244	77	90,825	65,097	544	64,553
2,721	65	35	10,149	8,564	..	8,564
831	88	61	7,535	6,265	..	6,265
605	97	97	5,331	4,680	..	4,680
526	118	118	5,209	4,617	..	4,617
1,113	140	133	8,457	7,453	20	7,433
303	27	19	3,457	3,012	..	3,012
581	44	44	4,850	4,260	..	4,260
832	121	120	11,805	10,242	..	10,242
385	200	..	5,490	4,453	..	4,453
1,572	349	293	25,508	21,978	..	21,978
1,381	292	255	23,411	19,486	..	19,486
366	53	53	2,633	2,211	..	2,211
1,874	168	109	9,941	8,495	..	8,495
166	3	3	1,666	1,380	..	1,389
388	9	9	2,208	1,873	17	1,850
3,544	201	162	23,071	19,500	86	19,416
954	84	41	5,234	4,462	138	4,324
628	563	404	1,460	1,287	8	1,274
285	16	16	1,957	1,644	..	1,644
564	46	36	4,292	3,603	59	3,544
1,278	142	127	7,712	6,522	28	6,494
847	83	68	5,306	4,524	137	4,387
21,744	2,909	2,203	1,76,682	1,50,511	493	1,50,018
21,744	2,909	2,203	1,76,682	1,50,511	493	1,50,018
1,545	8,324	92	1,50,644	79,777	4,377	75,400
5,764	7,956	3,933	15,374	11,696	2	11,694
2,189	16,959	10	1,98,288	1,26,694	11,549	1,15,145
25	1,166	..	58,416	36,139	288	35,851
7,474	12,761	1,026	4,46,952	3,49,425	74,806	2,74,619
23,330	20,607	3,263	3,39,148	2,76,636	68,951	2,07,685
9,575	9,375	1,215	2,41,371	2,05,169	35,914	1,69,255
7,469	6,923	1,533	2,39,629	2,04,582	9,642	1,94,940
4,642	7,677	1,552	1,11,443	85,490	10,209	75,281
23,509	24,621	1,184	8,13,195	5,62,204	1,22,037	4,40,167
21,901	6,281	3,802	3,20,637	2,34,731	69,958	1,64,773
17,772	4,277	175	4,96,384	3,42,000	7,189	3,34,811

Abstract statement of the extent of irrigation and the revenue

Class and names of systems and canals.	Expected ultimate area of irrigation.	Area occupied.		Area charged
		First crop.	Second crop.	First crop.
1	2	3	4	5
PROVINCIAL—*cont.*	ACS.	ACS.	ACS.	ACS.
Class IV.—Other Minor Works for which neither Capital nor Revenue nor Individual Accounts are kept—*cont.*				
(*Imperial*)—cont.				
13. Tanjore	Not fixed.	17,265	2,146	17,265
14. Trichinopoly		80,006	32,434	79,618
15. Madura		46,143	20,271	44,946
16. Tinnevelly		64,717	43,289	64,640
17. Coimbatore		39,355	20,028	38,986
18. Salem		28,728	27,893	27,606
Total, Imperial ..	..	1,048,770	271,740	1,002,396
Minor.				
(*b*). In charge of the Revenue Department.				
1. Ganjám	Not fixed.	60,754	3,885	60,739
2. Vizagapatam		57,726	53,935	57,287
3. Gódávari		50,515	964	49,095
4. Kistna		27,301	982	26,955
5. Nellore		36,293	5,239	34,982
6. Cuddapah		145,663	40,756	133,352
7. Anantapur		78,343	23,066	74,222
8. Bellary		20,898	5,910	20,330
9. Kurnool		27,989	2,881	25,977
10. Chingleput		122,430	12,855	117,581
11. North Arcot		154,062	66,149	141,332
12. South Arcot		184,198	45,114	183,311
13. Tanjore		37,633	4,131	37,570
14. Trichinopoly		47,184	14,616	46,598
15. Madura		79,693	17,910	72,427
16. Tinnevelly		84,945	45,502	84,385
17. Coimbatore		12,347	5,944	12,045
18. Salem		85,197	79,307	83,337
Total, Minor ..	..	1,313,111	429,146	1,261,525
Grand Total, Imperial and Minor ..	..	2,361,881	700,886	2,263,921

derived from Irrigation works for the fasli year 1310 (1900–1901)—*cont.*

as irrigated.	Area of lands irrigated free of charge included in columns 3 and 4.		Total, land and irrigation revenue.	Share due to irrigation.	Deduct remissions and deductions.	Net revenue due to irrigation.
Second crop.	First crop.	Second crop.				
6	7	8	9	10	11	12
ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.
2,146	2,956	27	60,181	45,962	3	45,959
32,434	5,080	728	5,95,773	4,36,004	3,932	4,32,072
20,256	2,683	858	2,55,725	2,15,520	12,859	2,02,661
43,289	4,015	2,475	4,96,587	4,31,496	1,969	4,29,527
19,659	3,004	1,741	2,35,159	1,95,770	6,616	1,89,154
26,776	1,675	1,509	1,63,673	1,17,308	8,977	1,08,331
269,755	146,340	25,123	52,38,579	39,56,603	4,49,278	35,07,325
3,885	10,036	180	1,47,176	80,639	2,156	78,483
53,502	16,798	16,618	2,59,705	1,85,793	7,421	1,78,372
964	12,220	45	1,51,099	1,04,988	17,057	87,931
982	2,192	64	1,35,760	97,205	6,714	90,491
5,239	5,736	203	1,53,790	1,19,183	18,543	1,00,640
39,973	42,990	7,588	6,54,771	5,31,722	1,72,120	3,59,602
23,065	13,212	2,938	2,97,615	2,48,138	23,802	2,24,336
5,910	4,584	2,310	81,744	67,885	5,109	62,776
2,869	8,319	419	1,16,861	90,654	22,547	68,107
12,848	12,711	381	3,91,477	2,69,307	51,388	2,17,919
65,292	27,077	12,714	7,89,509	5,77,967	1,36,882	4,41,085
45,114	8,248	649	9,47,891	6,54,320	9,459	6,44,861
4,131	4,736	2	1,17,327	85,366	701	84,665
14,616	8,882	326	1,70,529	1,20,294	3,060	1,17,234
17,873	4,331	2,050	3,19,057	2,47,441	49,148	1,98,295
45,434	6,608	2,523	5,18,595	4,48,812	19,497	4,29,313
5,820	1,356	223	55,268	43,702	2,089	41,613
77,488	6,532	5,781	4,34,931	3,14,859	18,301	2,96,558
425,005	196,568	55,014	57,43,105	42,88,275	5,65,994	37,22,281
694,760	342,908	80,137	1,09,81,684	82,44,878	10,15,272	72,29,606

APPENDIX III.

COMPARATIVE statement of the area irrigated and the revenue derived in each taluk under the Kurnool-Cuddapah canal for faslis 1309 (1899–1900) and 1310 (1900–1901).

Taluks.	Area irrigated. First crop. Wet.	Area irrigated. First crop. Dry.	Area irrigated. Second crop. Wet.	Area irrigated. Second crop. Dry.	Demand.	Re-missions.	Net demand.
1	2	3	4	5	6	7	8
	ACS.	ACS.	ACS.	ACS.	RS.	RS.	RS.
Kurnool.							
Nandyal .. 1309	3,267	6,786	56	1,148	26,284	..	26,284
Nandyal .. 1310	2,987	1,557	865	444	21,340	..	21,340
Difference ..	— 280	— 5,229	+ 809	— 704	— 4,944	..	— 4,944
Sirvel 1309	3,418	9,026	29	290	23,712	..	23,712
Sirvel 1310	1,221	8,253	117	249	22,328	..	22,328
Difference ..	— 2,197	— 773	+ 88	— 41	— 1,384	..	— 1,384
Koilkuntla .. 1309	255	4,913	8	120	6,652	..	6,652
Koilkuntla .. 1310	167	1,178	101	70	3,833	..	3,833
Difference ..	— 88	— 3,735	+ 93	— 50	— 2,819	..	— 2,819
Ramallakot .. 1309	2,212	577	313	142	11,405	7	11,398
Ramallakot .. 1310	2,068	588	583	159	12,236	..	12,236
Difference ..	— 144	+ 11	+ 270	+ 17	+ 831	— 7	+ 838
Nandikotkur .. 1309	4,182	19,456	209	1,064	43,418	14	43,404
Nandikotkur .. 1310	4,489	8,001	666	856	34,623	..	34,623
Difference ..	+ 307	— 11,455	+ 457	— 208	— 8,795	— 14	— 8,781
Total .. 1309 ..	13,334	40,758	615	2,764	1,11,471	21	1,11,450
Total .. 1310 ..	10,932	19,577	2,332	1,778	* 94,360	..	* 94,360
Difference ..	— 2,402	— 21,181	+ 1,717	— 986	— 17,111	— 21	— 17,090
Cuddapah.							
Cuddapah .. 1309	8,097	706	1,768	372	38,112	1,146	36,966
Cuddapah .. 1310	8,524	1,396	4,504	359	51,143	1,587	49,55
Difference ..	+ 427	+ 690	+ 2,736	— 13	+ 13,031	+ 441	+ 12,590
Proddatur .. 1309	3,972	3,808	34	792	27,584	109	27,475
Proddatur .. 1310	3,985	4,929	98	3,460	37,351	192	37,159
Difference ..	+ 13	+ 1,121	+ 64	+ 2,668	+ 9,767	+ 83	+ 9,684
Jammalamadugu. 1309	42	154	..	..	535	..	535
Jammalamadugu. 1310	58	227	..	..	405	..	405
Difference ..	+ 16	+ 73	..	..	— 130	..	— 130
Total .. 1309 ..	12,111	4,668	1,802	1,164	66,231	1,255	64,976
Total .. 1310 ..	12,567	6,552	4,602	3,819	88,899	1,779	87,120
Difference ..	+ 456	+ 1,884	+ 2,800	+ 2,655	+ 22,668	+ 524	+ 22,144
Grand Total .. 1309 ..	25,445	45,426	2,417	3,928	1,77,702	1,276	1,76,426
Grand Total .. 1310 ..	23,499	26,129	6,934	5,597	* 1,83,259	1,779	1,81,480
Difference ..	— 1,946	— 19,297	+ 4,517	+ 1,669	+ 5,557	+ 503	+ 5,054

* Exclusive of Rs. 790 being the value of water supplied to the Kurnool Municipality.

APPENDIX IV.

APPEN

STATEMENT showing the total area actually irrigated by flow or lift under classes I and

Name of system.	Area irrigated.					
	First crop.		Second crop.		Total.	Both seasons.
	Flow.	Lift.	Flow.	Lift.		
1	2	3	4	5	6	7
Class I—Works.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1. Gódávari anikat	658,851	15,468	132,233	4,294	810,846	4,396
2. Kistna do.	582,173	8,579	152	66	590,970	..
3. Cauvery do.	805,575	46,200	87,774	5,705	945,254	6,553
4. Pennér river canals	135,984	3,013	12,153	187	151,337	140
5. Srívaikuntam anikat	20,317	737	20,219	472	41,745	650
6. Barur tank project	2,836	5	996	1	3,838	299
7. Rushikulya do.	79,830	374	2,066	98	82,368	741
8. Kurnool-Cuddapah canal ..	48,255	671	12,396	134	61,456	1,295
9 Periyár project	99,577	581	31,364	91	131,613	652
Class II—Works.						
10. Pálár anikat	53,170	1,061	10,742	103	65,076	381
11. Pelandorai do.	9,160	98	437	8	9,703	155
12. Chembrambakkam tank	10,239	106	736	2	11,083	263
13. Madras water-supply and Irrigation extension project ..	6,298	338	954	16	7,606	156
14. Cumbum tank	5,435	38	1,523	2	6,998	155
15. Thadapalli channel	13,951	311	576	117	14,955	551
16. Arkankottai do.	4,184	49	19	12	4,264	31
17. Kalingaroyan do.	9,472	1,928	7,459	1,383	20,242	1,716
18. Vallúr anikat	3,163	466	201	9	3,839	59
19. Cheyáru do.	16,736	248	6,789	41	23,814	13
20. Poiney do.	12,159	127	2,054	37	14,377	12
21. Lower Coleroon do.	102,391	1,841	6,074	262	110,568	318
22. Shatiatope do.	25,979	351	4,456	36	30,822	33
23. Vriddhachálam do.	6,500	8	579	..	7,087	18
24. Mehmattur do.	3,725	24	362	5	4,116	18
25. Marudúr do.	17,078	158	14,796	137	32,169	517
26. Tirukkóyilúr do.	21,362	138	2,477	47	24,024	221
27. Ganjám Minor rivers system ..	57,933	1,473	13,090	273	72,769	100
28. Nandiyar channel	3,919	870	1,428	426	6,643	248
29. Sagileru "Upper" project ..	3,991	36	538	8	4,573	125
30. Munnyéru project	2,340	11	..	..	2,351	..
31. Dondapad do.	125	..	..	..	125	..

Note.—(1) The area under "both seasons" is included
(2) The areas in columns 2 to 6 include extent

DIX IV.

II works and the quantity and the value of crops raised thereon during 1900–1901.

Area irrigated with different crops.										
Paddy.				Ragi.				Other crops.		
Extent.	Total outturn in tons.	Total value.	Value of average outturn per acre.	Extent.	Total outturn in tons.	Total value.	Value of average outturn per acre.	Extent.	Value.	Value of average outturn per acre.
8	9	10	11	12	13	14	15	16	17	18
ACS.	TONS.	RS.	RS.	ACS.	TONS.	RS.	RS.	ACS.	RS.	RS.
697,154	396,913	2,67,74,967	38·4	3,716	1,266	82,497	22·2	86,192	12,56,441	14·6
579,109	379,630	2,60,65,977	45·0	2,788	601	44,784	16·0	7,819	2,26,065	30·2
878,079	539,502	3,60,78,182	41·0	28,811	7,321	4,90,808	17·0	37,616	4,76,608	12·7
138,993	78,566	56,47,877	40·6	3,446	727	53,455	15·5	8,438	73,433	8·7
39,208	13,706	9,91,809	25·2	304	32	2,232	7·3	2,152	14,380	6·6
2,956	1,453	1,10,255	37·2	279	55	4,215	15·1	603	5,755	9·5
80,218	43,632	23,71,937	29·5	751	79	4,672	6·2	1,391	1,28,943	92·7
25,200	13,478	10,29,873	40·9	4,439	1,193	94,088	21·2	31,817	11,62,405	36·5
121,245	50,482	35,35,950	29·1	6,158	1,048	70,836	11·5	4,124	47,859	11·6
47,143	18,069	13,19,896	27·9	7,716	824	68,190	8·8	5,212	21,504	4·1
9,030	4,452	3,00,285	33·3	234	48	3,627	15·5	419	11,405	27·2
4,438	855	66,258	14·9	1,447	154	13,196	9·1	995	23,160	23·2
6,032	1,612	1,24,922	20·7	795	89	7,626	9·5	635	4,903	7·7
4,370	2,915	2,22,739	50·9	490	128	10,167	20·7	2,116	40,063	18·9
14,075	9,055	6,77,688	48·1	32	5	349	10·9	848	48,638	57·3
4,175	3,144	2,35,301	56·3	4	1	70	17·5	85	2,255	26·5
15,435	11,689	8,74,820	56·6	2,279	409	28,531	12·5	2,523	3,25,440	128·7
2,227	492	38,128	17·1	382	34	2,913	7·6	173	890	5·1
17,621	8,281	5,95,751	33·8	3,164	376	30,788	9·7	1,870	4,565	2·4
7,579	2,910	2,09,191	27·6	3,743	398	32,565	8·7	1,987	9,662	4·9
104,165	64,332	43,27,687	41·5	3,318	790	57,939	17·4	2,533	25,134	9·9
27,092	14,524	9,79,637	36·1	2,475	573	43,302	17·4	1,231	22,065	17·9
6,501	3,986	2,68,854	41·3	184	39	2,947	16·0	402	2,161	5·4
3,834	1,897	1,27,952	33·3	147	32	2,418	16·4	124	2,434	19·6
29,208	11,790	8,53,161	29·2	736	103	7,185	9·7	2,082	23,325	11·2
21,174	11,438	7,71,488	36·4	1,674	433	32,722	19·5	1,163	28,913	24·8
59,843	38,881	21,13,661	35·3	1,312	191	11,296	8·6	11,614	34,973	3·0
4,310	1,726	1,22,466	28·4	679	114	7,802	11·4	1,654	35,054	21·1
2,650	1,521	1,24,960	47·1	480	97	7,649	15·9	1,422	18,490	13·0
2,336	1,746	1,19,989	51·3	..	..	..	..	15	230	15·3
1	..	..	..	99	28	2,087	21·0	25	187	7·4

under first and second crops.
under withered crops and exclude waste charged.

APPEN

STATEMENT showing the incidence of water-rates under

First

	Government.						Zamindari.				
								Charged.			
—	Extent of wet lands.	Water-rate of wet lands.	Rate per acre.	Extent of dry crops irrigated.	Water-rate of dry crops irrigated.	Rate per acre.	Irrigated free of charge for water.	Extent of wet lands.	Water-rate of wet lands.	Rate per acre.	Extent of dry crops irrigated.
1	2	3	4	5	6	7	8	9	10	11	12
Class I Works.	ACS.	RS.		ACS.	RS.		ACS.	ACS.	RS.		ACS.
1. Gódávari anikat	331,306	15,11,712	4·56	18,403	76,855	4·18	55,628	45,554	2,27,594	5·00	3,840
2. Kistna do.	354,347	16,95,783	4·79	5,908	22,360	3·78	18,516	94,608	5,00,241	5·29	6,100
3. Cauvery do.	752,597	37,70,804	5·01	30,300	76,417	2·52	413	..	..	..	..
4. Pennéru river canals ..	113,375	5,17,133	4·56	1,739	4,284	2 46	..	..	..	..	..
5. Srivaikuntam anikat ..	20,630	1,29,307	6·27	300	878	2·93	120	870	2,825	3·25	9
6. Barur tank project	2,733	9,776	3·58	42	93	2·21	..	..	..	..	22
7. Rushikulya do.	47,903	88,141	1·84	2,817	6,817	2·42	2,362	6,059	13,253	2·19	..
8. Kurnool-Cuddapah canal* ..	15,549	60,855	3·91	18,075	33,222	1·84	..	460	1,861	4·05	145
9. Periyár project	83,346	4,10,106	4·92	932	3,689	3·96	241	3,267	13,749	4·21	987
Class II Works.											
10. Pálár anikat	61,712	1,99,233	3·23	481	1,386	2·88	..	..	..	..	..
11. Pelandorai anikat	8,524	32,282	3·79	271	661	2·44	..	..	..	..	..
12. Chembrambakkam tank ..	10,880	38,617	3 55	25	57	2·28	..	..	..	..	..
13. Madras water-supply and irrigation extension project.	5,766	15,606	2·71	52	112	2·15	132	..	..	..	..
14. Cumbum tank	3,534	22,823	6·46	184	401	2·18	..	..	..	..	..
15. Thadapalli channel ..	13,403	98,934	7 38	295	1,186	4·02	..	..	..	..	..
16. Arkenkottai do. ..	4,027	28,293	7·03	64	189	2·95	..	..	..	..	..
17. Kalingaroyen do. ..	8,188	58,003	7·08	1,679	5,040	3·00	..	..	..	..	..
18. Vallur anikat	2,225	6,249	2·81	12	35	2·92	..	..	..	..	..
19. Cheyáru do.	17,019	55,146	3·24	119	288	2·42	..	..	..	..	..
20. Poiney do.	18,657	67,570	3·62	397	1,135	2·86	..	..	..	..	..
21. Lower Coleroon anikat ..	96,533	3,68,737	3·82	1,745	4,092	2·34	..	..	..	..	..
22. Shatiatope do. ..	25,637	92,150	3·61	780	2,006	2·57	..	..	..	..	..
23. Vriddháchalam do. ..	6,386	23,620	3·70	75	182	2·43	..	..	..	..	..
24. Mehamattur do. ..	3,425	15,592	4·55	53	130	2·45	..	..	..	..	..
25. Marudur do. ..	16,891	1,17,278	6·94	52	196	3·77	..	..	..	..	..
26. Tirukkóyilúr do ..	20,184	80,618	3·99	450	1,174	2·61	..	129	646	5·01	17
27. Ganjám minor rivers system.	38,202	98,725	2·58	69	154	2·23	4,753	..	..	..	..
28. Nandiyar channel	3,744	11,509	3·07	258	585	2·27	..	..	..	..	..
29. Dondapad tank project ..	4	12	3·00	119	346	2·91	..	..	..	..	..
30. Munnyéru do. ..	2,073	8,721	4·21	3	6	2 00	..	..	..	..	..
31. Sagiléru "Upper" project.	2,181	11,025	5·06	161	315	1 96	..	..	..	..	..

* Exclusive of Rs. 1,816 being the dry assessment on canal A and B canal lands Rs. 8,806 for water supplied to Government tank, Rs. 790 for value of water supplied to the Kurnool Municipality and Rs. 7 for water supplied to Indigo vats.

DIX V.

classes I and II works for fasli 1310 (1900–1901).

crop.		Inam.							Second crop.			
		Irrigated free of charge for water.	Charged.						Irrigated free of charge for water.	Charged.		
Water-rate of dry crops irrigated.	Rate per acre.		Extent of wet lands.	Water-rate of wet lands.	Rate per acre.	Extent of dry crops irrigated.	Water-rate of dry crops irrigated.	Rate per acre.		Extent.	Water-rate.	Rate per acre.
13	14	15	16	17	18	19	20	21	22	23	24	25
RS.		ACS.	ACS.	RS.		ACS.	RS.		ACS.	ACS.	RS.	
13,044	3·40	73,219	150,481	7,56,936	5·03	12,092	37,611	3·11	423	136,956	5,04,983	3·69
22,784	3·74	37,238	80,392	4,19,796	5·22	3,720	12,101	3·25	..	222	868	3·91
..	..	102,487	5,442	22,697	4·17	4,285	11,315	2·64	7,549	91,744	3,29,249	3·59
..	..	24,016	5,439	21,560	3·96	957	2,438	2·55	..	12,350	27,512	2·23
31	3·44	1,075	390	1,643	4·21	82	200	2·44	528	22,507	72,377	3·21
93	4·23	130	69	247	3·58	13	45	3·46	130	1,989	2,266	1·14
..	..	9,546	10,633	23,421	2·20	995	2,138	2·15	7	2,232	4,516	2·02
236	1·63	..	7,491	29,729	3·97	7,908	13,011	1·65	..	12,531	33,714	2·69
7,403	7·50	4,419	11,324	53,906	4·76	48	200	4·17	486	38,099	1,11,438	2·93
..	..	11,760	141	305	2·16	115	228	1·98	3,886	13,707	33,566	2·45
..	..	314	420	1,566	3·73	37	122	3·30	..	445	988	2·22
..	..	1,994	1	2	2·00	1	3	3·00	200	1,246	3,444	2·76
..	..	1,450	9	52	5·78	4	7	1·75	420	966	2,341	2·42
..	..	1,800	5	19	3·80	9	20	2·22	1,460	2,858	10,405	3·64
..	..	471	198	867	4·38	13	35	2·69	..	693	2,417	3·49
..	..	120	19	77	4·05	32	124	3·88	..	31	116	3·74
..	..	847	165	667	4·04	568	1,926	3·39	842	9,572	36,036	3·76
..	..	2,735	27	69	2·56	76	162	2·13	9	201	372	1·85
..	..	1,706	70	190	2·71	25	52	2·08	1,618	10,599	16,104	1·52
..	..	2,101	3	16	5·33	16	48	3·00	156	2,272	4,898	2·16
..	..	8,102	859	3,343	3·89	169	490	2·90	156	6,180	15,189	2·46
..	..	1,524	162	633	3·91	52	166	3·19	..	4,492	9,549	2·13
..	..	107	42	131	3·12	3	8	2·67	..	579	1,041	1·80
..	..	33	198	788	3·98	66	258	3·91	..	367	942	2·57
..	..	655	..	..	..	..	..	..	531	16,315	69,704	4·27
70	4·12	1,577	38	143	3·76	20	65	3·25	23	2,503	4,901	1·96
..	..	16,492	382	1,453	3·80	23	64	2·78	..	13,363	15,181	1·14
..	..	40	744	2,741	3·68	116	354	3·05	..	2,004	3,452	1·72
..	..	..	..	..	..	2	6	3·00	..	..	..	..
..	..	..	281	1,267	4·51	2	4	2·00	..	..	..	..
..	..	1,723	39	138	3·54	16	32	2·00	..	605	1,098	1·81

APPEN

STATEMENT showing the water-rates per acre which were in force under classes I

Description of crop.	Gódávari and Kistna Anikats. Irrigation by Flow.	Gódávari and Kistna Anikats. Irrigation by Lift.	Kurnool-Cuddapah Canal. Irrigation by Flow.	Kurnool-Cuddapah Canal. Irrigation by Lift.
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
1. Single wet crop irrigated	5 0 0	3 12 0	4 0 0	3 0 0
2. Second wet crop on irrigated lands	5 0 0	3 12 0	3 0 0	2 4 0
3. If compounded for two crops for a term of not less than five years	8 2 0	6 1 6	6 0 0	4 8 0
4. Sugarcane, betel, plantains and other garden produce remaining on the ground for the time of two crops	10 0 0	7 8 0	6 0 0	4 8 0
5. Sugarcane, betel, plantains and other garden produce, if compounded for a time of not less than five years	8 2 0	..	..	..
6. Single dry crops	..	..	1 0 0	0 12 0
7. Second dry crop on irrigated land	2 8 0	1 14 0	1 0 0	0 12 0
8. Dry crops, whether first or second crop, grown on land for which irrigation has never been supplied, or, if once supplied, discontinued	2 8 0	1 14 0	1 0 0	0 12 0
9. Dry crops systematically irrigated	5 0 0	3 12 0	..	..
10. Garden crops (Class II of Madras Irrigation Canal Company's Rules)	..	..	3 0 0	2 4 0
11. Mundla (tailed or coarse paddy)	..	..	2 0 0	1 8 0
12. Single wet crop on wet or mamul irrigated lands in zamindaris and whole inam villages, the old sources of supply to which have not been interfered with but for which canal water is taken	..	..	..	..
13. Single wet crop raised on rainfed paddy (Manavari) lands, whether in Government, zamin or whole inam villages ..	..	..	..	..
14. Single wet crop raised on ordinary dry lands, whether in Government, zamin, or whole inam villages	..	..	..	..
15. Second wet crop raised on lands falling under either of the above three heads [(12), (13), (14)]	..	..	..	..
16. Second wet crop or for sugarcane, betel, plantains, &c., requiring water longer than an ordinary wet crop, raised on wet lands in zamindaris and whole inam villages deprived wholly or partially of their old sources of irrigation but which are entitled to free irrigation for only one wet crop [G.O., No. 6195, Revenue, dated 3rd December 1891]	..	..	..	..
17. Lands falling under either of the first three heads, 12, 13 and 14, cultivated with sugarcane, betel, plantains, &c., requiring water longer than an ordinary wet crop	..	..	..	..
18. Dry crops if irrigated (whether first or second crop) on land falling under either of the first three heads 12, 13 and 14 ..	..	..	..	..
19. Irrigated dry crops raised as second crop on lands falling under head 16 and on registered single crop wet lands in Government villages provided that in the latter case half the first crop assessment may be levied instead, if it is less than the water rate	..	..	..	..
20. Single crop raised on dry lands	..	..	..	..
21. Second wet crop on the same land	..	..	..	..
22. Sugarcane, betel, plantain and other crops remaining on the ground for the term of two crops	..	..	..	..
23. Dry crops watered, whether first or second	..	..	..	..

DIX VI.

and II, works, in the Madras Presidency during the year ending 30th June 1901.

Srivaikuntam and Marudur anikats. *		Rushikulya project.		Periyár project.		Other systems. *	
Irrigation by		Irrigation by		Irrigation by.		Irrigation by	
Flow.	Lift.	Flow.	Lift.	Flow.	Lift.	Flow.	Lift.
		RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.		
..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..
..	..	2 0 0	1 8 0	..	..	..	..
..	..	2 0 0	1 8 0	..	..	..	..
..	..	3 0 0	2 4 0	..	..	..	..
..	..	1 8 0	1 2 0	..	..	..	..
..	..	1 8 0	1 2 0	..	..	..	..
..	..	4 8 0	3 6 0	..	..	..	..
..	..	1 8 0	1 2 0	..	..	..	..
..	..	1 8 0	1 2 0	..	..	..	..
..	..	..	..	5 0 0	3 12 0	..	..
..	..	..	..	3 0 0	2 4 0	..	..
..	..	..	..	8 0 0	6 0 0	..	..
..	..	..	..	2 8 0	1 14 0	..	..

* In modification of the former rates Government has sanctioned the following scheme of rates for "Srivaikuntam and Marudur anikats "and Other systems"† :—

First crop on dry land.	Second crop on dry land.	Srivaikuntam and Marudur anikats.		Other systems.	
		First crop.	Second crop.	First crop.	Second crop.
		RS.	RS.	RS.	RS. A. P.
Wet	Wet	4	4	4	2 0 0
Do.	Dry, systematically irrigated..	4	3	4	1 8 0
Do.	Do. occasionally irrigated	4	2	4	1 0 0
Dry, systematically irrigated ..	Wet	3	4	3	2 8 0
Do. do. do.	Dry, systematically irrigated	3	3	3	2 0 0
Do. do. do.	Do. occasionally irrigated	3	2	3	1 8 0
Dry, occasionally irrigated	Wet	2	4	2	3 0 0
Do. do. do.	Dry, systematically irrigated	2	3	2	2 8 0
Do. do. do.	Do. occasionally irrigated	2	2	2	2 0 0

† As tentative measure for other systems.

REMARKS.—Deduction of one-fourth of the water-rate is allowed for "baling."

APPENDIX VII.

ABSTRACT statement showing the demand, collection and balance under the Kurnool-Cuddapah canal for the official year 1900–1901.

Items.	Cuddapah district.	Kurnool district.	Total.
	RS.	RS.	RS.
Uncollected balance on 1st April 1900	45,998	47,027	93,025
Net demand for the fasli year 1310 (1900–1901) exclusive of remissions	87,120	* 94,360	1,81,480
Total ..	1,33,118	1,41,387	2,74,505
Collections including collection charges at 5 per cent. during the official year ..	† 66,571	93,922	1,60,493
Sums written off as irrecoverable during the official year 1900–1901	..	..	..
Total ..	66,571	93,922	1,60,493
Uncollected balance on 1st April 1901	66,547	47,465	1,14,012

* Exclusive of Rs. 790 being value of water supplied to the Kurnool Municipality.

† This amount excludes excess collection of Rs. 19 in Jammalamadugu taluk of Cuddapah district.

APPENDIX VIII.

STATEMENT showing the particulars of cultivation, revenue demand and remissions under the Kurnool-Cuddapah canal in the district of Kurnool for fasli 1310.

[FORM A.—*Vide* Board's Proceedings, dated 8th July 1889, No. 338 (R.S., L.R. and Agri.)].

Particulars.		Extent.	Rate.	Demand.	Remissions. Failure of crops by excess or deficiency of water.	Remissions. Other causes.	Remissions. Total.	Net demand.
1		2	3	4	5	6	7	8
		ACS.	RS. A. P.	RS. A. P.				RS. A. P.
1. Single wet crop irrigated ..	Flow ..	9,487·58	4 0 0	37,950 4 1	..	..	..	37,950 4 1
	Lift ..	87·05	3 0 0	261 2 6	..	..	..	261 2 6
2. Second wet crop irrigated ..	Flow ..	1,676·60	3 0 0	5,030 6 5	..	..	..	5,030 6 5
	Lift ..	18·35	2 4 0	41 4 7	..	..	..	41 4 7
Paddy, irrigated during second crop season	Flow ..	114·32	4 0 0	457 4 6	..	..	..	457 4 6
3. If compounded for two crops for a term not less than five years.	Flow ..	..	..	..	..	..	..	..
	Lift ..	..	..	..	..	..	..	..
4. Sugarcane, betel, plantains and other garden produce.	Flow ..	289·48	6 0 0	1,736 14 11	..	..	..	1,736 14 11
	Lift ..	2·65	4 8 0	11 14 10	..	..	..	11 14 10
5. Single dry crop irrigated ..	Flow ..	9,792·21	1 0 0	9,792 3 4	..	..	..	9,792 3 4
	Lift ..	11·30	0 12 0	8 7 8	..	..	..	8 7 8
6. Second dry crop do. ..	Flow ..	1,517·42	1 0 0	1,517 6 9	..	..	..	1,517 6 9
	Lift ..	6·79	0 12 0	5 1 6	..	..	..	5 1 6
7. Dry crops whether first or second crop grown on land for which irrigation has never been supplied or, if supplied, discontinued.	Flow ..	..	..	..	..	..	..	..
	Lift ..	..	..	..	..	..	..	..
8. Garden crops (class 2) of Madras Irrigation Canal Company's rules.	Flow ..	6,857·26	3 0 0	20,571 13 3	..	..	..	20,571 13 3
	Lift ..	64·06	2 4 0	144 1 5	..	..	..	144 1 5
9. Mandlavari	Flow ..	2,982·62	2 0 0	5,965 6 11	..	..	..	5,965 6 11
	Lift ..	12·96	1 8 0	19 7 2	..	..	..	19 7 2
10. Canal A and B class lands *		..	..	1,812 14 11	..	..	..	1,812 14 11
11. Lands given on favourable terms under paragraph 2 of G.O., No. 448-I., dated 6th June 1882		754·09	..	1,722 3 5	..	..	..	1,722 3 5
12. Lands given on favourable terms under paragraph 3 of G.O., No. 448-I., dated 6th June 1882		943·59	..	727 8 0	..	..	..	727 8 0
13. Water supplied to indigo vats ..		..	..	7 0 0	..	..	..	7 0 0
14. Canal water supplied to tanks		..	..	5,665 8 10	..	..	..	5,665 8 10
15. Penalty		..	..	911 2 9	..	..	..	911 2 9
16. Water supplied to Kurnool Municipality		..	..	790 0 0	..	..	..	790 0 0
Total ..		34,618·33	..	95,149 9 9	..	..	..	95,149 9 9

* Extent of canal A and B class lands cultivated—

	ACS.
Ramallakot	370·4
Nandikotkur	268·71
Nandyal	109·23
Koilkuntla	2·10
Sirvel	..
Total ..	750·08

APPENDIX VIII.

STATEMENT showing the particulars of cultivation, revenue demand and remissions under the Kurnool-Cuddapah canal in the district of Cuddapah for fasli 1310.

[FORM A.—*Vide* Board's Proceedings, dated 8th July 1889, No. 338 (R.S., L.R. and Agri.)].

Description of crops.		Area.	Water-rate.	Final demand.	Remissions. Failure of crops by excess or deficiency of water.	Remissions. Other causes.	Remissions. Total.	Net demand.
1		2	3	4	5	6	7	8
		ACS.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
1. Single wet crop on irrigated land.	Flow ..	9,004·38	4 0 0	36,037 13 0	..	..	..	36,037 13 0
Second crop paddy	,, ..	1·84	3 0 0	5 9 0	..	..	..	5 9 0
Paddy crop withered ..	,, ..	2·61	1 0 0	2 9 0	..	..	..	2 9 0
Single wet crop on irrigated. land.	Lift ..	0·72	3 0 0	2 2 0	..	..	..	2 2 0
Penal rates (*i.e.*), one and a half times.	Flow ..	101·10	6 0 0	606 4 0	..	..	..	606 4 0
	Lift ..	..	..	..	..	..	..	..
2. Second crop on irrigated land	Flow ..	50·0	1 8 0	75 0 0	..	..	..	* 75 0 0
3. Composition for two crops for a term of not less than five years.	Flow ..	..	..	..	..	..	..	..
	Lift ..	..	..	..	..	..	..	..
4. Sugarcane, betel garden, turmeric and other garden produce remaining on the ground for the time of two crops.	Flow ..	782·53	6 0 0	4,696 7 0	..	..	..	4,696 7 0
	Lift ..	13·51	4 8 0	60 14 0	..	..	..	60 14 0
Penal rates (*i.e.*), one and a half times.	Flow ..	3·68	9 0 0	32 11 0	..	..	..	32 11 0
	Lift ..	..	..	..	..	..	..	..
Mundlapaddy	Flow ..	49·63	2 0 0	99 5 0	..	..	..	99 5 0
5. Single dry crops	Flow ..	4,036·32	1 0 0	4,042 6 0	..	..	..	4,042 6 0
	Lift ..	59·75	0 12 0	47 0 0	..	..	..	47 0 0
Penal rates (*i.e.*), one and a half times.	Flow ..	153·81	1 8 0	230 6 0	..	..	..	230 6 0
	Lift ..	7·55	1 2 0	8 7 0	..	..	..	8 7 0
6. Second dry crop on irrigated if not compounded.		..	..	..	..	..	..	..
7. Dry crops on lands for which irrigation has never been supplied or, if supplied, discontinued.		..	..	..	..	..	..	..
8. Garden crops (garden ragi, onions, chillies, sweet-potatoes, tobacco, mizea, garden korra, indigo, vegetables, wheat, cummin seed, bariga and mentulu)	Flow ..	..	..	..	..	..	..	..
Class 2 of Irrigation and Canal Company's rules.	Flow ..	11,004·21	3 0 0	33,032 14 0	..	..	..	33,032 14 0
Do. (Ragi spoiled). ..	,, ..	0·95	1 0 0	0 14 0	..	..	..	0 14 0
Do. do. ..	Lift ..	476·92	2 4 0	1,074 0 0	..	..	..	1,074 0 0
Penal rates	Flow ..	108·93	4 8 0	491 3 0	..	..	..	491 3 0
	Lift ..	25·3	3 6 0	84 11 0	..	..	..	84 11 0
Indigo spoiled and charged at Re. 1.	Flow ..	60·47	1 0 0	60 7 0	..	..	..	60 7 0
Indigo spoiled and charged at Rs. 1–8–0	Flow ..	2·80	1 8 0	4 3 0	..	..	..	4 3 0
9. Cowle and block rate lands.	Flow ..	609·00	4 0 0	2,436 3 0	..	903 12 0	903 12 0	1,532 7 0
	Flow ..	743·80	3 0 0	2,231 6 0	..	734 14 0	734 14 0	1,496 8 0
	Flow ..	155·16	1 0 0	155 5 0	..	47 13 0	47 13 0	107 8 0
	Lift ..	71·14	2 4 0	160 1 0	..	71 14 0	71 14 0	88 3 0
Penal rates	Flow ..	11·99	6 0 0	73 0 0	..	19 13 0	19 13 0	53 3 0
	,, ..	1·93	1 0 0	1 15 0	..	0 15 0	0 15 0	1 0 0
Miscellaneous revenue on the indigo not supplied by canal water.		..	..	2 0 0	..	..	..	2 0 0
Value of water supplied to tanks by canal ..		..	..	3,140 0 8	..	..	..	3,140 0 8
Miscellaneous Revenue on B class lands ..		..	..	3 9 0	..	..	..	3 9 0
Total ..		27,539·76	..	88,898 8 8	..	1,779 1 0	1,779 1 0	87,119 7 8

* Compounded water-rate under a special rate tank.

Extent of B class lands cultivated—

	ACS.
Cuddapah	3·80
Proddatur	·35
Total ..	4·15

ORDER—No. 129 I., dated 28th January 1902.

Communicated to the officers concerned, for information, in continuation of G.O., No. 93 I., dated 20th January 1902.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
,, the Chief Engineer for Irrigation, Tank Restoration Scheme.
,, all Superintending Engineers.
,, the Examiner, Public Works Accounts.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. *Spare copies*

G.O., No. 130 I., 28th January 1902.

JANUARY.

Buddi Tank Drainage Scheme, Nellore

Letter from the Government of India sanctioning the estimate, amounting to Rs. 18,100, for the ––, communicated to the officers concerned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following paper:—

From W. L. STRANGE, Esq., Under Secretary to the Government of India, Public Works Department (Civil Works—Irrigation), to the Joint Secretary to the Government of Madras, Public Works Department, Irrigation Branch, dated Calcutta, 16th January 1902, No. 59 C.W.I.

I am directed to acknowledge the receipt of the Proceedings of the Government of Madras, No. 917 I., dated the 29th November 1901, and, in reply, to say that the Government of India sanction the estimate, therewith forwarded, amounting to Rupees 18,100, including establishment and tools and plant charges, for the Buddi Tank Drainage Scheme, Nellore, chargeable against the Open Capital Account of the Pennér river canals system, the work being classed as unremunerative.

2. This sanction has been registered as No. 44 I. of 1901–1902. The plans and estimates are herewith returned.

ORDER—No. 130 I., dated 28th January 1902.

Communicated to the officers concerned for information.

2. The sanction accorded by the Government of India is registered as No. 148 I. of 1901–1902.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, II Circle, with 30 enclosures.
" Examiner of Public Works Accounts.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. } *Spare copies*

G.O., No. 133 I., 29th January 1902.

JANUARY.

Pandur Hissa Tank, Kalinganadi Minor Basin, Chingleput District

The execution by the Public Works Department of the contribution work of effecting repairs to the —, sanctioned, with remarks.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following paper :—

No. 133 T.

Note by the Chief Engineer for Irrigation, Tank Restoration Scheme.

An estimate for Rs. 1,230 having been sanctioned for repairing Pandur hissa tank of No. 266, Pandur village, Tiruvallúr taluk, Kalinganadi minor basin, sanction of Government is requested, under paragraph 1011 of the Public Works Department Code, for the execution of the work as a contribution work.

The tank irrigates 693 acres in two Government villages, viz., No. 266, Pandur, and 269, Aruthur; and 193 acres of shrotriem lands in No. 268, Enadivattu, and No. 267, Kovurpad villages. The amount of contribution due from the shrotriemdars is Rs. 268 as given in the margin.

	RS.
Amount of estimate	1,230
Contribution due by shrotriemdars, $\frac{1,230 \times 193}{886}$	268

The Collector of Chingleput has stated in his No. 1781 Genl., dated 14th October 1901, to the Executive Engineer, Chingleput division, that the shrotriemdars have not consented to contribute, and that the amount of contribution will have to be recovered from them by a civil suit. The Collector has requested the Executive Engineer to arrange for putting the repairs to the tank in hand as early as possible.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation, T.R.S.

21st January 1902.

ORDER—No. 133 I., dated 29th January 1902.

The execution by the Public Works Department of the work referred to is sanctioned. The contribution due from the shrotriemdars will be recovered by a civil suit on completion of the work.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" " " Tank Restoration Scheme.
" Superintending Engineer, V Circle, with plans and estimate.
" Examiner of Public Works Accounts.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd.	1902.	*Enclosures*
Regd.		*Spare copies*

G.O., No. 134 I., 29th January 1902.

JANUARY.

Construction of a Picottah

The — by S. Giddiah in the Kurnool-Cuddapah canal, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers :—

From Lieutenant-Colonel W. L. C. BADDELEY, R.E., Superintending Engineer, III Circle, to the Chief Engineer for Irrigation, dated Bellary, 20th December 1901, No. 4217 I.

I have the honour to forward a stamped agreement executed by Silla Giddiah of Kurnool for constructing a picottah in the Kurnool-Cuddapah canal at 1 mile 62 chains and request that you will be good enough to obtain the necessary sanction of Government with reference to G.O., No. 899 I., dated 15th November 1894.

The Collector of Kurnool informs me that the document is in the proper form and free from any objection.

No. 2 I.

Note by the Chief Engineer for Irrigation.

Submitted to Government.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

2nd January 1902.

ORDER—No. 134 I., dated 29th January 1902.

The construction of a picottah by S. Giddiah in the Kurnool-Cuddapah canal is sanctioned.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
,, Superintending Engineer, III Circle, with one enclosure.
,, Examiner of Public Works Accounts.
,, Revenue Department.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd.	1902.	*Enclosures*
Regd.		*Spare copies*

G.O., No. 135 I., 29th January 1902.

JANUARY.

Experimental Hydraulic Shutter

The estimate of Rs. 3,000 for making an — proposed to be applied eventually at the Sangam head works, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers:—

From the General Superintendent, P.W. Workshops, dated 6th Jan. 1902, No. W.C.I./11.

No. 22 I.

Note by the Chief Engineer for Irrigation.

The General Superintendent, Public Works Workshops, submits an estimate of Rs. 3,000 for an experimental hydraulic shutter which it is proposed to apply eventually at the Sangam head works. The estimate may be sanctioned.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

18th January 1902.

Order—No. 135 I., dated 29th January 1902.

The following estimate is sanctioned:—

Imperial.
Irrigation.
42. Major Works (Working Expenses).
Pennér River Canals System.
1. Extensions and Improvements.
I. Head Works.
C. Works.
Making an experimental shutter.

	RS.
Estimate	3,000

2. This sanction is registered as No. 149 I. of 1901-1902.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
„ Superintending Engineer, II Circle.
„ Examiner, Public Works Accounts.
„ General Superintendent, Public Works Workshops.

IRRIGATION.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. *Spare copies*

G.O., No. 136 I., 30th January 1902.

JANUARY.

Wharves

The proposal of the Superintending Engineer, II Circle, to constitute certain lengths of the Pulleru and Masulipatam canals — in view of the proposed construction of the Bezwada-Masulipatam Railway, approved, with remarks.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

READ—the following papers :—

From the Superintending Engineer, II Circle, dated 13th January 1902, No. 393 I.

No. 24 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, II Circle, requests that the marginally-noted lengths of the Pulleru and the Masulipatam canals in the Kistna eastern delta may be constituted wharves under Madras Act II of 1890 in view of the proposed construction of the Bezwada-Masulipatam Railway, and recommends that no fees be, however, levied at them for the present. The Superintending Engineer's proposals may be approved.

(1) Left bank of the Pulleru canal from the headlock of the Polraz canal at 36 miles 5 chains to the Kowtaram lock at the head of the Bontumilli canal at 36 miles 10 chains.
(2) From the Masulipatam basin at 49 miles 11 chains to $49\frac{1}{2}$ miles — a distance of 51 chains; this wharf to be subsidiary to that at the Chintaguntapalem bridge at 46 miles 26 chains.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

22nd January 1902.

ORDER—No. 136 I., dated 30th January 1902.

Approved.

2. The following notification will be published in the *Fort St. George Gazette* :—

NOTIFICATION.

It is hereby notified that the following lengths of the Pulleru and the Masulipatam canals in the Kistna eastern delta are constituted wharves under Madras Act II of 1890, no fees being, however, levied at them for the present :—

(1) Left bank of the Pulleru canal from the head lock of the Polraz canal at 36 miles 5 chains to the Kowtaram lock at the head of the Bontumilli canal at 36 miles 10 chains.

(2) From the Masulipatam basin at 49 miles 11 chains to $49\frac{1}{2}$ miles — a distance of 51 chains; this wharf to be subsidiary to that at the Chintaguntapalem bridge at 46 miles 26 chains.

3. The Superintending Engineer, II Circle, will arrange to have the notification published in the Kistna District Gazette.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
,, Superintending Engineers, I, II and V Circles.
,, the Examiner, Public Works Accounts.
,, the Revenue Department.
,, the Superintendent, Government Press, with notification.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. } *Spare copies*

G.O., No. 137 I., 30th January 1902.

JANUARY.

Quarters for the Sub-section Officer, Periyar Project

The estimate of Rs. 750 for constructing —, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers:—

From the Superintending Engineer, VI Circle, dated			25th May 1901,	No.	563 M. D.
To	,,	,,	,,	1st June	,, ,,	22 M. D.
From	,,	,,	,,	23rd Dec.	,, ,,	1392 M. D.

Enclosure.

Report to accompany the Estimate for constructing channel Superintendent's quarters at Mettupatty.

	RS.
Amount of Estimate	750

Suitable quarters not are available either in Alanganallur or Mettupatty, and it is essential that the sub-section officer of No. 2 section should reside in the neighbourhood of his work, an estimate and plan are therefore submitted for sanction. A data statement for rent is enclosed.

A suitable site is available close to the rest-house at Mettupatty. The work will be carried out in accordance with the standard specifications current in the department.

H. T. KEELING,
Ex. Engineer, Madura Divn.

23rd March 1900.

No. 23 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, VI Circle, submits an estimate of Rs. 750 for constructing suitable quarters for the sub-section officer, Periyár Project, at Mettupatty, in order that he may live near his work instead of at Madura as at present. The estimate may be sanctioned.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

22nd January 1902.

Order—No. 137 I., dated 30th January 1902.

The following estimate is sanctioned:—

Imperial.
Irrigation.
42. Major Works and Working Expenses.
Periyár Project.
1. Extensions and Improvements.
2. Main Canals and Branches.
K. Buildings.
Constructing quarters for the sub-section officer, Periyár Project.

	RS.
Estimate	750

2. This sanction is registered as No. 150 I. of 1901–1902.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, VI Circle, with plan and estimate.
" Examiner, Public Works Accounts.

IRRIGATION.
ACCOUNT.

Government {1902} of Madras.

PUBLIC WORKS.

Recd.	} 1902.	*Enclosures*	
Regd.		*Spare copies*	

G.O., No. 138 I., 30th January 1902.

JANUARY.

Wadada Main Channel, Ganjam Division

The estimates of Rs. 1,500 and Rs. 1,800 for the diversion in two places, respectively, of the —, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers :—

From the Superintending Engineer, I Circle, dated 2nd January 1902, No. 9/G.N.

Enclosure.

Report to accompany the Estimate for the proposed diversion of the Wadada Main Channel above the old bridge.

	RS.
Amount of Estimate	1,430

The Wadada main channel above the old bridge runs in awkward windings, which it is proposed to straighten as per the survey submitted herewith, and the present estimate is accordingly submitted for sanction. No money need be paid for compensation on account of the land that is to be taken up, for the owners want the old channel in exchange, and that may be given.

The work, when sanctioned, will be carried out as per standard specifications.

(Signed) S. A. SWAMINATHA AIYAR,
Sub-divisional Officer.

(„) M. LOAM,
Ex. Engineer, Ganjám Divn.

29th October 1901.

No. 25 I.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, I Circle, submits for sanction, under open capital account of the Ganjám minor rivers system, two estimates—one for diverting the Wadada main channel below the Thotada regulator and the other for diverting the same above the old bridge—amounting to Rs. 1,185 and Rs. 1,430, respectively. The channel at both these places runs in such awkward windings that it gradually scours away private lands, the owners of which have appealed for redress. The proposed diversions are therefore necessary and the estimates are recommended for sanction.

2. The works will probably be completed by the 31st March 1903.

(Signed) A. W. SMART, Col., R.E.,
Ag. Chief Engineer for Irrigation.

22nd January 1902.

ORDER—No. 138 I., dated 30th January 1902.

The following estimates are sanctioned :—

Provincial.
Irrigation.
43. Minor Works and Navigation.
Class II—Minor Works and Navigation for which Capital and Revenue Accounts are kept.
Ganjám Minor Rivers System.
Open Capital Account.
I. Works.
2. Main Canals and Branches.
(i) Diverting the Wadada Main channel below the Thotada regulator.

	RS.
L. Earthwork—	
Diversion of channel	1,150
O. Miscellaneous—	
Demarcation of land	35
Total, I. Works	1,185
II. Establishment ...	273
III. Tools and plant ...	42
Grand Total ...	1,500

(ii) Diverting the Wadada Main channel above the old bridge.

L. Farthwork—	
Diversion of the channel	1,385
O. Miscellaneous—	
Demarcation of land	45
Total, I. Works ...	1,430
II. Establishment ...	329
III. Tools and plant ...	41
Grand Total ...	1,800

2. These sanctions are registered as No. 151 I. and No. 152 I. of 1901–1902, and will expire on the 31st March 1903.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
,, Superintending Engineer, I Circle, with plans and estimates.
,, Examiner, Public Works Accounts.

IRRIGATION.

Government {1902} of Madras.

PUBLIC WORKS.

Recd. } 1902. *Enclosures*

Regd. } *Spare copies*

G.O., No. 143 I., 31st January 1902.

JANUARY.

Closure of Canals, Kistna Delta System, in 1902

Ordering the publication in the Fort St. George, Gódávari and Kistna District Gazettes of a revised notification regarding the —.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

Read—the following papers:—

G.O., No. 42 I., dated 10th January 1902.
Endorsement of the Superintending Engineer, II Circle, dated 23rd Jan. 1902, No. 409 I.

Order—No. 143 I., dated 31st January 1902.

The following revised notification will be published in the *Fort St. George Gazette* and the Gódávari and Kistna District Gazettes until the 1st June 1902:—

REVISED NOTIFICATION.

Closure of Canals in 1902.

Kistna Delta System.

Canals.	Date of Closing.	Date of Re-opening.
Eastern Section.		
Main canal	14th February 1902 ..	1st June 1902.
Masulipatam canal		
Ellore canal		
Ryves' ,, ...		
All other canals		
Western Section.		
Main canal	1st April 1902 ..	1st June 1902.
Nizampatam canal		
Commamur canal		
Bank canal	15th February 1902 ..	1st June 1902.

Note.—Canals do not become thoroughly navigable for about 48 hours after reopening.

(True Extract.)

(Signed) A. W. SMART, Col., R.E.,
Ag. Joint Secretary to Government,
Irrigation Branch

To the Chief Engineer for Irrigation.
,, Superintending Engineer, I Circle.
,, ,, ,, II ,,
,, Superintendent, Government Press (with notification).
,, Revenue Department.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT

TABULAR STATEMENT OF MISCELLANEOUS PROCEEDINGS AND MATTERS OF ROUTINE,

IRRIGATION.

FOR THE MONTH OF JANUARY 1902.

Subjects.	Number and Date of Order.	Numbers and Dates of previous Orders.
Funds.—Sanctioning, with remarks, certain transfers of — under 43. Minor Works and Navigation.	2nd Jan. 1902, No. 1 I.	......
Survey of the Gódávari river and its affluents.—Ordered that a letter be sent to the Government of India stating that this Government has no objection to the deputation of a detachment of Nos. 9 and 19 parties, Survey of India Department, for the — and that the map and the information required by the Surveyor-General have been already furnished by the Chief Engineer for Irrigation direct to the officer in charge of the above parties.	2nd do. do. No. 2 I.	28th June 1901, Nos. 515–16 I. 13th May 1901, Nos. 404–405 I. & file.
Letter to the Government of India	2nd do. do. No. 3 I.	......
"*Indian Bradshaw*".—Proceedings, Financial Department, communicating to the Accountant-General office-note from the Joint Secretary, Public Works Department, Irrigation Branch, regarding the continuance of the supply to his office of the —, recorded.	3rd do. do. No. 5 I.	......
Land.—Directing the Tahsildar of Narasapur to procure the temporary occupation and use of the — required for excavating Gudimellanka side channel, Narsapur taluk, Gódávari district.	3rd do. do. No. 6 I.	......
Land.—The notification for the acquisition of certain — in the Ganjám district required for diversion of Bhairi Main channel above the Garu Chintadu road culvert, approved and ordered to be published in the *Fort St. George Gazette.*	3rd do. do. No. 7 I.	
Land.—The notification for the acquisition of certain — in the Kistna district required for Yadlapalli right branch at 3/1 mile of Tungabhadra side channel, approved and ordered to be published in the *Fort St. George Gazette.*	3rd do. do. No. 8 I.	......

Subjects.	Number and Date of Order.	Numbers and Dates of previous Orders.
Funds.—Application from the Chief Engineer for Irrigation for an additional allotment of Rs. 18,675 required for raising the left bank of the Vasista Gódávari, from 14 miles to 45 miles, Gunuram canal, Gódávari Central division, transferred to the Financial Department.	3rd Jan. 1902, No. 9 I.	......
Land.—Directing the Tahsildar of Rajahmundry to procure the occupation and use of the — required for closing breaches in the Gódávari left flood bank from Rajahmundry to Purushotapatnam, Gódávari district.	4th do. do. No. 10 I.	......
Land.—Directing the Sub-Collector, Gódávari District, to procure the occupation and use of certain — required for raising the Gódávari left flood bank above Rajahmundry to Purushottapatnam.	6th do. do. No. 11 I.	......
Suit.—Filed against Government by Mr. Fischer in respect of the falling shutters on the Peranai anicut across the Vaigai river (confidential).	6th do. do. No. 12 I.	......
Thottiam Chinnavoikal, Musiri Taluk, Trichinopoly Division.—The execution by the Public Works Department of the work of constructing 5 cement pipe sluices in —, sanctioned.	6th do. do. No. 13 I.	......
Funds.—Telegram from the Government of India intimating that Rs. 1,28,000 have been withdrawn under 49. Capital expenditure not charged to Revenue, communicated to the officers concerned for information.	7th do do. No. 14 I.	14th Dec. 1901, No. 972/A.B. I.
Administration Report of Irrigation works, Public Works Department, Burma.—Letter from the Government of Burma forwarding a copy of the — for the year 1900–1901, communicated to the Chief Engineer for Irrigation.	7th do. do. No. 15 I.	......
Irrigation Commission.—Proceedings, Revenue Department, communicating to the departments of the Secretariat, the Heads of Departments under the Revenue Secretariat and the Hon'ble Mr. Nicholson, the revised programme of tour of the — in the Madras Presidency and Mysore, communicated to the officers of the Public Works department.	7th do. do. No. 18 I.	......
Funds.—Certain transfers of — under Provincial 43. Minor Works and Navigation, sanctioned with remarks.	8th do. do. No. 19 I.	......
Transfer of Funds.—Proceedings, Financial department, requesting the Accountant-General to place at the disposal of the Public Works department a sum of Rs. 3,393 from the grant for the current year under 43. Irrigation — Minor Works and Navigation — in charge of civil officers on account of Minor Irrigation works in the Chingleput district, communicated to the officers concerned for information.	9th do. do. No. 20 I.	7th Nov 1901, No. 843 I. 19th Aug. 1901, No. 623 I.

Subjects.	Number and Date of Order.	Numbers and Dates of previous Orders.
Transfer of Funds.—Proceedings, Financial department, requesting the Accountant-General to place at the disposal of the Public Works Department a sum of Rs. 2,000 from the grant for the current year under 43 Irrigation — Minor Works and Navigation — in charge of civil officers on account of Nallacheruvupalle channel in the Cuddapah district, communicated to the officers concerned for information.	9th Jan. 1902, No. 21 I.	......
Land.—The notification for the acquisition of certain — in the Kurnool district, required for main irrigation channel under the Chepad project, approved and ordered to be published in the *Fort St. George Gazette.*	9th do. do. No. 22 I.	......
Land.—The notification for the acquisition of certain — in the Gódávari district, required for depositing silt for repairing Lolla drain, approved and ordered to be published in the *Fort St. George Gazette.*	9th do. do. No. 23 I.	......
Letters of Credit.—The Examiner, Public Works Accounts, authorized to issue the — applied for by the Executive Engineers, Kistna Eastern and Northern divisions, and the Superintending Engineer, II Circle, asked to submit an application for the additional allotment required under Excluded Local Fund.	9th do. do. No. 28 I.	......
Addenda and Corrigenda to the Manual of Rules and Notifications under the Northern India Canal and Drainage Act (*VIII of* 1873).—Ordered that the Government of Punjab be requested to supply this Government with 7 more copies of —.	9th do. do. No. 30 I.	......
Letter to the Government of Punjab	9th do. do. No. 31 I.	.. ...
Store Shed.—The sale of the — near the bungalow on the Kaveripak tank bund, North Arcot division, sanctioned.	10th do. do. No. 32 I.	......
Funds.—Certain transfer of — under Imperial 42. Major Works (working expenses), sanctioned with remark.	10th do. do. No. 33 I.	......
Land.—The notification for the acquisition of certain — in the Gódávari district, required for the diversion of the river embankment at Gutala, approved and ordered to be published in the *Fort St. George Gazette.*	10th do. do. No. 34 I.	......
Land.—The notification for the acquisition of certain — in the North Arcot district, required for the Valathur tank bund, approved and ordered to be published in the *Fort St. George Gazette.*	10th do. do. No. 35 I.	......
Lands.—Statement of required to be temporarily occupied for closing breaches in Aghanda Gódávari, returned by the Superintending Engineer, I Circle, recorded.	10th do. do. No. 36 I.	......
Funds.—Certain transfers of — under Imperial 42. Major Works (working expenses), and Provincial, 43. Minor Works and Navigation, sanctioned.	10th do. do. No. 43 I.	......

Subjects.	Number and Date of Order.	Numbers and Dates of previous Orders.
Land.—The notification for the acquisition of certain — in the Tinnevelly district, required for the flood bank of the catchment channel of Sevalkulam, Peryaperali village, Sáttúr taluk, approved and ordered to be published in the *Fort St. George Gazette.*	10th Jan. 1902, No. 44 I.	......
Lands.—Seven notifications for the acquisition of — in the Chicacole taluk, Ganjám district, required for certain irrigation works, approved and ordered to be published in the *Fort St. George Gazette.*	10th do. do. No. 45 I.	......
Land.—Two notifications for the acquisition of — in the Chicacole taluk, Ganjám district, required for the diverson of Sagaram and Calingapatam sub-branch channels, approved and ordered to be published in the *Fort St. George Gazette.*	10th do. do. No. 46 I.	......
Mr. Higham's Hydraulic Tables.—Ordered that the Government of India be requested to supply six more copies of — for distribution to the Superintending Engineers.	10th do. do. No. 47 I.	......
Letter to the Government of India	10th do. do. No. 48 I.	......
Funds.—Certain transfer of — in the Coimbatore division under Provincial, 43. Minor Works and Navigation, sanctioned with remarks.	11th do. do. No. 49 I.	
Dinghy.—Sanctioning, with remarks, the construction of a — for use by the Revenue Inspectors of Kaikulur and Kaldindi, Gudiváda taluk.	11th do. do. No. 50 I.	......
Land.—The notification for the acquisition of certain additional — required for strengthening the bank of the Sarvasiddhi channel and for replacing Pedda Uppalam river channel, Vizagapatam district, approved, with remarks, and ordered to be published in the *Fort St. George Gazette.*	11th do. do. No. 51 I.	......
Land.—The notification for the acquisition of certain — in the Gódávari district, required for the proposed Babpully channel, approved and ordered to be published in the *Fort St. George Gazette.*	11th do. do. No. 52 I.	......
Land.—The notification for the acquisition of certain — in the Gódávari district, required for excavating Gudemallanka side channel, approved and ordered to be published in the *Fort St. George Gazette.*	11th do. do. No. 53 I.	......
Land.—The notification for the acquisition of certain — in the Tinnevelly district, required for the surplus Odai of Pelaiporuttankulam, approved and ordered to be published in the *Fort St. George Gazette.*	11th do. do. No. 54 I.	......
Land.—The notification for the acquisition of certain — in the Kistna district required for raising and strengthening the ring bund around Turpupalem, approved and ordered to be published in the *Fort St. George Gazette.*	11th do. do. No. 55 I.	......

Subjects.	Number and Date of Order.	Numbers and Dates of previous Orders.
Land.—The notification for the acquisition of certain — in the Kistna district, required for a new channel from Alla Seshayya's sluice in ¾ mile left of Kunduru channel, approved and ordered to be published in the *Fort St. George Gazette*; and the Head Assistant Collector, Kistna, directed to procure the temporary occupation of 1·14 acres of land for the same purpose.	11th Jan. 1902, No. 56 I.	......
Land.—The notification for the acquisition of certain — in the Ganjám district, required for the Chikkala khandy minor distributary, approved and ordered to be published in the *Fort St. George Gazette.*	11th do. do. No. 57 I.	......
Land.—Directing the Tahsildar of Narsapur to procure the temporary occupation and use of certain — in the Gódávari district required for Mogalikuduru channel.	15th do. do. No. 61 I.	......
Land.—The notification for the acquisition of certain — required for repairs to Kalingula channel at Srungavruksham, Bhimavaram taluk, Gódávari district, approved and ordered to be published in the *Fort St. George Gazette.*	15th do. do. No. 62 I.	......
Leasing of Lankas.—Proceedings, Revenue Department, recording Board's Proceedings passing orders on a letter from the Collector of Kistna enquiring whether the consent of the Superintending Engineer and the sanction of the Board of Revenue should be obtained for leases of more than one year of lankas, etc., in rivers not conserved under the River Conservancy Act, recorded.	15th do. do. No. 63 I.	......
Suit.—A copy of the order sanctioning the defence of the — brought against Government by the Wuyyur zamindar for the recovery of the value of certain trees in the Wuyyur limits and on the banks of the Pulleru canal, which were sold by auction by the Sub-divisional officer, Public Works Department, furnished to the Collector of Kistna, and the draft written statement, submitted by the Collector, approved.	15th do. do. No. $\frac{63}{A}$ I.	23rd Oct. 1901, No. $\frac{800}{A.}$ I.
Special Allotment for Madras.—Proceedings, Financial Department, directing that the Government of India be furnished with a list of public works on which the Government of Madras has decided to spend in 1902–1903 the special grant of 10 lakhs which the Government of India proposes to make to Madras, recorded.	17th do. do. No. 66 I.	......
Budget Estimates.—Proceedings, Financial Department, reviewing the — of charges under the Irrigation Cess fund for 1902–1903, communicated to the officers concerned.	17th do. do. No. 67 I.	17th Jan. 1901, No. 53 I.
Budget Estimates.—Proceedings, Financial Department, accepting the — of receipts for 1902–1903 under XXX Irrigation — Minor Works and Navigation — in charge of Public Works officers, communicated to the officers concerned for information.	17th do. do. No. 68 I.	......

Subjects.	Number and Date of Order.	Numbers and Dates of previous Orders.
Funds.—Note by the Chief Engineer for Irrigation suggesting that the Financial Department may be requested to transfer certain — to meet the outlay on "Minor Works, Revenue Department", Gódávari district, transferred to the Financial Department.	17th Jan. 1902, No. 69 I.	......
Land.—Notification for the acquisition of—required for field channel from Manjampatti sluice, Madura taluk, Madura district, ordered to be published in the *Fort St. George Gazette.*	17th do. do. No. 82 I.	......
Land.—Notification for the acquisition of—required for supply channel, Thandalai offtake, IV branch channel, Madura taluk, Madura district, ordered to be published in the *Fort St. George Gazette.*	18th do. do. No. 83 I.	......
Land.—Notification for the acquisition of — required for the diversion of the Korin branch channel near the right flank of Sagaram tank of Gara, Bhyry channel system, Chicacole taluk, Ganjám district, ordered to be published in the *Fort St. George Gazette.*	21st do. do. No. 95 I.	......
Land.—Notification for the acquisition of — required for extending Machapuri channel, Narasapur taluk, Gódávari district, ordered to be published in the *Fort St. George Gazette.*	21st do. do. No. 96 I.	......
Land.—Notification for the acquisition of — required for closing breaches in the Gódávari embankment, Yerragudem taluk, Gódávari district, ordered to be published in the *Fort St. George Gazette.*	21st do. do. No. 97 I.	......
Funds.—Certain transfer of — under Provincial, 43. Minor Works and Navigation, sanctioned.	21st do. do. No. 98 I.	......
New sluice and channel to Pushpagiri lands, Kurnool division.—Ordered that the date of completion of the work of constructing the — be extended to 31st January 1902.	21st do. do. No. 99 I.	......
Irrigation Commission.—Proceedings, Revenue Department, ordering that the Secretary, —, be informed that Mr. H. H. O'Connell will appear for examination before the Commission at Madras instead of at Tanjore, recorded.	22nd do. do. No. 100 I.	......
Funds.—Certain transfer of — under Provincial, 43. Minor Works and Navigation, sanctioned.	23rd do. do. No. 101 I.	......
Contribution Work.—The execution by the Public Works Department of the — of clearing silt from the head sluice of Wyacondam channel, VI Circle, sanctioned with remarks.	23rd do. do. No. 102 I.	......
Funds.—Certain transfer of — under Imperial, 42. Major Works (Working Expenses), sanctioned.	23rd do. do. No. 103 I.	......
Funds.—Certain transfer of — under Provincial, 43. Minor Works and Navigation, sanctioned with remark.	23rd do. do. No. 104 I.	13th Dec. 1901, No. 958 I.

Subjects.	Number and Date of Order.	Numbers and Dates of previous Orders.
Rent.—Approving the — of ten annas eight pies per diem fixed by the Superintending Engineer, II Circle, for the use of the Kistna anicut paddle boat by private individuals.	23rd Jan. 1902, No. 105 I.	20th Nov. 1901, No. 3171 W. 23rd Aug. 1901, No. 2265 W. 4th March 1901, No. 559 W. 4th Dec. 1900, No. 3336 W. 29th Oct. 1900, No. 3010 W. 8th July 1901, No. 1834 W. 10th June 1901, No. 1559 W.
Funds.—Certain transfers of — under Provincial, 43. Minor Works and Navigation, sanctioned with remark.	23rd do. do. No. 106 I.	2nd Jan. 1902, No. 1 I. 1st June 1900, No. 504 I.
Excess Expenditure.—Authorizing the Examiner of Public Works Accounts to pass the — of Rs. 1,662 incurred on the work of resluicing the Kalinga-royen channel, Coimbatore division.	23rd do. do. No. 107 I.	......
Land.—Notification for the acquisition of — required for repairing the surplus channel of Sambakulam tank, Madura taluk, Madura district, ordered to be published in the *Fort St. George Gazette.*	24th do. do. No. 108 I.	......
Land.—Notification for the acquisition of — required for the proposed Sitarampuram branch of Mogul-tur channel, Narasapur taluk, Gódávari district, ordered to be published in the *Fort St. George Gazette.*	24th do. do. No. 110 I.	......
Land.—Notification for the acquisition of — required for Chopad project, Proddatur taluk, Cuddapah district, ordered to be published in the *Fort St. George Gazette.*	24th do. do. No. 111 I.	......
Land.—Notification for the acquisition of — required for sloping the eroded margin of Pedamallam set and planting the same with nanel, in the Narasapur taluk, Gódávari district, ordered to be published in the *Fort St. George Gazette.*	24th do. do. No. 112 I.	......
Land.—Notification for the acquisition of — required for the diversion of Verri Batti at its head, Wadada channel, Chicacole taluk, Ganjám district, ordered to be published in the *Fort St. George Gazette.*	24th do. do. No. 113 I.	......
Land.—Notification for the acquisition of — required for repairing the Keithinanda drain, Narasapur taluk, Gódávari district, ordered to be published in the *Fort St. George Gazette.*	24th do. do. No. 114 I.	......
Land.—Notification for the acquisition of — required for excavating Nandirapi Kodu channel, branch of Yanamaduran channel, Bhímavaram taluk, Gódávari district, ordered to be published in the *Fort St. George Gazette.*	24th do. do. No. 115 I.	......

Subjects.	Number and Date of Order.	Numbers and Dates of previous Orders.
Land.—Notification for the acquisition of — required for the construction of a tank at Kottapalli, Pulivendla taluk, Cuddapah district, ordered to be published in the *Fort St. George Gazette.*	24th Jan. 1902, No. 116 I.	......
Land.—Notification for the acquisition of — required for the proposed branch channel from Alichagudi dam, Vriddhachalam taluk, South Arcot district, ordered to be published in the *Fort St. George Gazette.*	24th do. do No. 117 I.	......
Land.—Ordered that the notification for the acquisition of — for extending the field channel from 3 miles, 3 furlongs, 300 feet, of Kollur side channel in Ipur, Tenali taluk, Kistna district, be cancelled.	24th do. do. No. 123 I.	......
Land.—Notification for the acquisition of — required for the Pennar and Malatur embankments, Villupuram taluk, South Arcot district, ordered, with remarks, to be published in the *Fort St. George Gazette.*	24th do. do. No. 124 I.	......
Rules regulating the personal conduct of Government Servants.—Proceedings, Public Department, recording Proceedings, Financial Department, regarding the printing and distribution of the —, recorded.	24th do. do. No. 125 I.	......
Land.—Notification for the acquisition of — required for the diversion of the Nagarikatakam channel, Chicacole taluk, Ganjám district, ordered to be published in the *Fort St. George Gazette.*	24th do. do No. 126 I.	......
Funds.—Certain transfer of — under Provincial, 43. Minor Works and Navigation, sanctioned with remark.	27th do. do. No. 127 I.	......
Credit.—Authorizing, with remarks, the Examiner, Public Works Accounts, to issue to the full extent the — applied for by the Executive Engineers, Kistna Eastern and Northern divisions, under "43. Minor Works and Navigation."	27th do. do. No. 128 I.	......
Funds.—Ordered that a telegram be sent to the Government of India, requesting acceptance of Rs. 1,17,800 under "49. Capital expenditure not charged to Revenue" surrendered by the Superintending Engineers, II, V and VI Circles, and that a copy of the Proceedings be forwarded to the Government of India for information.	28th do. do. No. $\frac{130}{A}$ I.	......
Forwarded	28th do. do. No. $\frac{130}{B}$ I.	......
Budget Estimates.—Proceedings, Financial Department, accepting the — of charges under 43. Irrigation—Minor Works and Navigation—In charge of Civil officers for 1902–1903, communicated to the officers concerned.	29th do do. No. 131 I.	......
Objectionable Items.—Orders on the statement of — in the accounts of Executive Engineers remaining unremedied to end of September 1901, I Circle.	29th do. do. No. 132 I.	......

Subjects.	Number and Date of Order.	Numbers and Dates of previous Orders.
Landing and Shipping of Government Stores.—Proceedings, Marine Department, directing the circulation to the officers concerned of the rules regarding the —, communicated to the Chief Engineer for Irrigation.	31st Jan. 1902, No. 139 I.	......
Land.—Notification for the acquisition of — required for excavating field channels, Madura taluk, Madura district, ordered to be published in the *Fort St. George Gazette.*	31st do. do. No. 140 I.	......
Land.—Notification for the acquisition of — required for excavating field channels in Paravyangulam village, Madura taluk, Madura district, ordered to be published in the *Fort St. George Gazette.*	31st do. do. No. 141 I.	......
Land.—Notification for the acquisition of — required for excavating minor distributaries for 9th branch channel and its off-takes, Madura taluk, Madura district, ordered to be published in the *Fort St. George Gazette.*	31st do. do. No. 142 I.	......